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ABSTRACT

This comprehensive catalog of available instructional materials for use with the PLATO system lists completed lessons which have been used in actual instructional situations or have had adequate testing to ensure that the files are in working order. Printed directly from the CERL online catalog, "uicat," the information provided for each citation includes the subject, a subheading, title with its PLATO code, year of first copyright and publication date, author, location of the author at the time the lesson was produced, an abstract, auxiliary equipment required, lesson completion time, and intended audience. Library of Congress subject headings have been used to catalog the lessons whenever possible, and extensive cross references are provided. The materials listed range in level of difficulty from the primary level through higher education, and embrace a wide variety of disciplines; e.g., reading; basic mathematics; languages, including English composition and English as a second language; business and accounting; botany, chemistry, and physics; algebra; statistics; engineering education; psychology; sociology; music; military science; teacher training; and medical education, including simulations for physicians, nursing and pharmacology courses, and courses for physician's assistants. Programs introducing the PLATO system and authoring PLATO courseware are also provided among a number of "utility" and computer science courses. (CHC)

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CERL PLATO LESSON CATALOG

Curricular and Utility Programs

by

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FOREWORD

The CERL PLATO Lesson Catalog presents information on available completed lessons which have been used in actual instructional situations, or have had adequate testing to guarantee that the files are in working order. The information in the catalog is printed directly from the CERL on-line catalog, "uicat".

The information for each lesson is presented in the following format:

Subject
  Sub-heading (if any)
    TITLE (PLATO lesson codename; year of first copyright; publication year)
    Author(s)
    Location of author(s) at time of lesson production
      Abstract of lesson
    Auxiliary equipment required; lesson completion time; intended audience

Library of Congress subject headings have been used to catalog the lessons whenever possible. Extensive cross referencing of the lessons has been made. Thus, repetition of lessons and their information abounds throughout the catalog for the convenience of the users.

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Abscission (Botany)

FRUITING AND LEAF SENESCENCE (botb;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson describes fruit formation, growth and maturation and enables the student to deduce the physiology of leaf abscission from hormone experiments.
none;15-20 minutes;college/university students

Absorption of light

INTRODUCTION TO BEER'S LAW (vuspec; 1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is designed for students in quantitative analysis. It introduces Beer's Law and contains a selection of typical problems. The lesson starts with the basic requirements necessary to absorb radiant energy through the analysis of a two component mixture.
none;45 minutes;chemistry students studying quantitative analysis

Absorption (Physiology)

DIGESTIVE ORGANS AND THEIR FUNCTIONS (nutr2;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This second lesson in the Nutrition Series presents material about the chemical processes contributing to the breakdown and utilization of food.
none;25-30 minutes;nutrition students

Acceleration

GRAVITATIONAL POTENTIAL ENERGY (gravpot;1978;unpublished)
Beece, Daniel
Dept. of Physics, U of I, Urbana, Ill.
The purpose of this lesson is to provide an introduction to gravitational potential energy. It assumes that the student is familiar with the concepts of force and acceleration, and the Work-Energy equation.
touch panel;none;college/university students

KINEMATICS I (kineml;1970,1972;1977)
Sherwood, Bruce Arne; Peterson, S Bradley; Beece, Daniel
Physics Department, University of Illinois
The lesson presents the basic concepts of position, velocity, acceleration, and time based on the familiar aspects of automobile travel. The lesson includes training in the reading of graphs, and in applying the principles illustrated in the lesson. A mastery quiz is included.
none;40 minutes;college/university students in introductory physics

KINEMATICS II (kinem2;1973,1977;1977)
Sherwood, Bruce Arne; Beece, Daniel
Physics Department, University of Illinois
The lesson presents a simple numerical integration with graphs which leads up to the derivation by the student of the equation $x_f = x_i + v_i t + at^2/2$, the determination of the position of an object given its acceleration. Applications of the concepts and a mastery quiz are included.
none;90 minutes;college/university students in introductory physics

ORBITS (orbits2;1974;unpublished)
Bennett, Carol D; Kane, Dennis
Physics Department, University of Illinois, Urbana
The lesson presents two-dimensional orbit equations and numerical two-dimensional kinematics. Vectors are defined and their proper notation discussed, as well as gravitational acceleration. The procedures are explained and the equations can be plotted.
none;none;physics students

TWO-DIMENSIONAL KINEMATICS (kinem3;1975;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson introduces and tests the basic concepts of vector displacement, velocity, average velocity, and acceleration. Various applications deal with kicking a football. Circular motion is also treated, including a derivation of the radial acceleration v^2/r. Applications include satellite motion. A mastery quiz ends the lesson.
none;170 minutes;college/university students in introductory physics

Accounting

ACCOUNTS RECEIVABLE (accrec;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches methods of handling some of the problems that occur in the area of accounts receivable: in particular, estimating uncollectable receivables, writing off uncollectable accounts, recording collections of previously written-off accounts and aging accounts receivable.
none;none;introductory accounting students

ACCRUAL CONCEPTS (accrual;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson explains the concepts of accrual basis accounting and gives the students practice in learning when to recognize revenue and expenses.
none;15-20 minutes;introductory accounting students

ADJUSTING ENTRIES (acprob;1978;unpublished)
McKeown, James C; Lenehen, Thomas
U of I, Urbana, Ill.; Kennedy-King Col., Chicago
This lesson familiarizes students with adjustments and gives them practice in making adjusting entries.
none;30-45 minutes;introductory accounting students

ADJUSTING ENTRIES II (stateanal;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides practice in making various kinds of adjusting entries.
none;45-60 minutes;introductory accounting students

BANK RECONCILIATIONS (bankrec;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson presents problems to be worked and should be used only after a discussion or reading of material on Bank Reconciliations.
none;35-50 minutes;introductory accounting students

BREAK-EVEN ANALYSIS (cost1;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews break-even analysis and shows how cost and revenue curves are used in managerial decision making.
none;45 minutes;introductory accountancy students

CAPITAL BUDGETING (irr;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop an understanding of 1) the two main methods of evaluating capital budgeting proposals (Net Present Value and Internal Rate of Return) and 2) the relationship and uses of these two methods.
none;30-45 minutes;introductory accounting students

CHANGES IN THE BALANCE SHEET EQUATION (jbc;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson presents the Balance Sheet Equation and the effect of specific events on Balance Sheet Accounts such as Cash, Inventory, Accounts Receivable and Payable, etc.
none;25-40 minutes;introductory accounting students

CLASSIFICATION AND NORMAL BALANCES (class;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides practice in recognizing proper accounts and making proper entries.
none;10-20 minutes;introductory accounting students

CLOSING ENTRIES (close;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides practice in making closing entries in both a service and a merchandising organization.
none;30-40 minutes;introductory accounting students

COMPOUND INTEREST (jcm;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the fundamentals of compound interest, the methods of computing present and future value, and the use of future value, present value, and present value of annuity tables.
none;open-ended;introductory and managerial accounting students

COST CLASSIFICATION (cost2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson analyzes cost classification by designating costs according to the way in which they can be allocated to the product.
none;10-15 minutes;introductory accounting students

COST VS EQUITY (equity;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the student when and how to use the cost and equity methods of accounting for ownership in long term stock investments.
none;30 minutes;introductory accounting students

ENTRIES FOR CORPORATIONS (tkl;1978;unpublished)
McKeown, James C
Department of Accountacy, U of I, Urbana, Ill.
This lesson teaches the student how to make proper entries for stock issuance under various conditions, i.e., the sale of stock for cash and other assets, the sale of common and preferred shares, the sale of shares at par value or premium.
none;60 minutes;introductory accounting students

FIXED ASSETS I (tab;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the recording of the acquisition of fixed assets and the major methods of depreciating them.
none;60 minutes;introductory accounting students

FIXED ASSETS II (tab2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson completes the review of fixed assets begun in "Fixed Assets I"; specifically to teach the various aspects involved in the disposal of an asset.
none;45 minutes;introductory accounting students

FUNDS FLOW (fundflow;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop the reasons for the Statement of Funds Flow, to explain what funds mean in this context, and to illustrate how the statement is constructed and how it should be interpreted.
none;45-60 minutes;introductory accounting students

FUNDS STATEMENT (fund2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the student the process of collecting and summarizing information in order to present a meaningful Funds Statement.
none;60 minutes;introductory accounting students

GENERAL JOURNAL AND LEDGER (ledger;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accounancy, U of I, Urbana, Ill.
This lesson provides practice journalizing transactions and preparing an income statement from the resultant trial balance, and journalizing closing entries and preparing a balance sheet.
none;open-ended, depending on user's skill;introductory accounting students

INCOME STATEMENT (incst;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the proper form and components of an income statement.
none;30-45 minutes;introductory accounting students

INCREMENTAL ANALYSIS (increm;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson explains the use of incremental analysis to make a choice between alternative courses of action.
none;15-20 minutes;introductory accounting students

INTRODUCTION TO COST ACCOUNTING (cost;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides a review of cost accounting information previously covered in other courses and extends the material on cost accounting beyond what is covered in the classroom.
none;45 minutes;introductory accounting students

INTRODUCTION TO PLATO-IV (accintro;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
General instructions in the use of PLATO with specifics applying to accountancy are contained in this lesson.
none;20-30 minutes;accountancy students

INVENTORY METHODS (ltinv;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson is a brief review of inventory evaluation methods through the presentation of several problems in each section.
none;30-45 minutes;introductory accounting students

INVENTORY (PERPETUAL AND INVENTORY ERRORS) (entry3;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson clarifies the difference between perpetual and periodic inventories, illustrates the effect of errors in inventory on cost of goods sold and net income, and tests the student's understanding of the relationship between various elements in an income statement.
none;20-30 minutes;introductory accounting students

JOB-ORDER COSTING (tab3; 1978;unpublished)
McKeown, James C
Department of Accountacy, U of I, Urbana, Ill.
This is to review the elements of job order costing and to give the student practice applying overhead and making the account entries involved in job order costing.
none;60 minutes;introductory accounting students

JOURNAL ENTRIES I (jbc2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides a brief review of T accounts, debits, credits and practice making journal entries in order to see how transactions effect the balance sheet account.
none;60 minutes;introductory accounting students

JOURNAL ENTRIES II (invplan;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson helps provide an understanding of the entries necessary for general journal transactions. Also discussed are some of the different types of general journal transactions encountered in a service type firm amd a merchandise firm.
none;30 minutes per section;introductory accounting students

LONG-TERM INVESTMENTS (ltinve;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop an understanding of the reasons for discount and premium and the methods of calculating amortization and accounting for premium and discounts in relationship to long-term investment in securities. The straight line method of calculating amortization is used.
none;45-60 minutes;introductory accounting students

LONG-TERM LIABILITIES (ltliaba;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the accounting for long-term liabilities from the debtor's point of view. A knowledge of the reasons for and the process of amortization of discount or premium is presumed. The straight line method of calculating amortization is used.
none;20-30 minutes;introductory accounting students

NON-MANUFACTURING COSTS (budget2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the problems and methods of controlling marketing and administrative costs.
none;60 minutes;introductory accounting students

NOTES AND INTEREST (notint;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson familiarizes the student with recording notes and calculating and recording interest and discounts.
none;45-60 minutes;introductory accounting students

OPERATIONAL AND PRODUCTION BUDGETING (budget;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson on operational and production budgeting presents problems in in each of the following areas: economic order quantity, projecting performance, flexible budgeting and formula budgeting. There is no introductory or review material, but help is available.
none;20-30 minutes;managerial accounting students

PROCESS COSTING (cost3;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson is a review of the product costing aspects of cost accounting as used for inventory valuation and income determination and as a basis for pricing.
none;60-90 minutes;introductory accounting students

SPECIAL JOURNALS (sj;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews various special journals and gives the students practice in classifying events using these journals.
none;5-10 minutes;introductory accounting students

STANDARD COSTING I (std1;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson introduces the aspects of standard cost related to direct materials, direct labor and manufacturing overhead.
none;15 minutes;introductory accounting students

STANDARD COSTING II (standard;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson illustrates the application of standard costing and familiarizes students with the analysis and recording of material and labor price (rate) and usage (efficiency) variances.
none;45 minutes;introductory accounting students

TEMPORARY INVESTMENTS (tempinv;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches initial recording of temporary investments, recording revenue from temporary investments, valuation of temporary investments, disposition of temporary investments.
none;45-60 minutes;introductory accounting students

TERMS OF SALE (discount;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson familiarizes the student with various terms of sale and allows them to compute invoice price discounts and freight charges.
none;30-45 minutes;introductory accounting students

WORKSHEETS (worksheet;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides the student with practice using a worksheet to summarize all accounts with non-zero balances.
none;30-45 minutes;introductory accounting students

Accounting--Problems, exercises, etc.

ACCOUNTS RECEIVABLE (accrec;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches methods of handling some of the problems that occur in the area of accounts receivable: in particular, estimating uncollectable receivables, writing off uncollectable accounts, recording collections of previously written-off accounts and aging accounts receivable.
none;none;introductory accounting students

ADJUSTING ENTRIES II (stateanal;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides practice in making various kinds of adjusting entries.
none;45-60 minutes;introductory accounting students

BANK RECONCILIATIONS (bankrec;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson presents problems to be worked and should be used only after a discussion or reading of material on Bank Reconciliations.
none;35-50 minutes;introductory accounting students

BREAK-EVEN ANALYSIS (costl;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews break-even analysis and shows how cost and revenue curves are used in managerial decision making.
none;45 minutes;introductory accountancy students

CAPITAL BUDGETING (irr;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop an understanding of 1) the two main methods of evaluating capital budgeting proposals (Net Present Value and Internal Rate of Return) and 2) the relationship and uses of these two methods.
none;30-45 minutes;introductory accounting students

COMPOUND INTEREST (jcm;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the fundamentals of compound interest, the methods of computing present and future value, and the use of future value, present value, and present value of annuity tables.
none;open-ended;introductory and managerial accounting students

COST VS EQUITY (equity;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the student when and how to use the cost and equity methods of accounting for ownership in long term stock investments.
none;30 minutes;introductory accounting students

ENTRIES FOR CORPORATIONS (tkl;1978;unpublished)
McKeown, James C
Department of Accountacy, U of I, Urbana, Ill.
This lesson teaches the student how to make proper entries for stock issuance under various conditions, i.e., the sale of stock for cash and other assets, the sale of common and preferred shares, the sale of shares at par value or premium.
none;60 minutes;introductory accounting students

FIXED ASSETS I (tab;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the recording of the acquisition of fixed assets and the major methods of depreciating them.
none;60 minutes;introductory accounting students

FIXED ASSETS II (tab2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson completes the review of fixed assets begun in "Fixed Assets I"; specifically to teach the various aspects involved in the disposal of an asset.
none;45 minutes;introductory accounting students

FUNDS FLOW (fundflow;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This purpose of this lesson is to develop the reasons for the Statement of Funds Flow, to explain what funds mean in this context, and to illustrate how the statement is constructed and how it should be interpreted.
none;45-60 minutes;introductory accounting students

FUNDS STATEMENT (fund2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the student the process of collecting and summarizing information in order to present a meaningful Funds Statement.
none;60 minutes;introductory accounting students

GENERAL JOURNAL AND LEDGER (ledger;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accounancy, U of I, Urbana, Ill.
This lesson provides practice journalizing transactions and preparing an income statement from the resultant trial balance, and journalizing closing entries and preparing a balance sheet.
none;open-ended, depending on user's skill;introductory accounting students

INCREMENTAL ANALYSIS (increm;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson explains the use of incremental analysis to make a choice between alternative courses of action.
none;15-20 minutes;introductory accounting students

INTRODUCTION TO COST ACCOUNTING (cost;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides a review of cost accounting information previously covered in other courses and extends the material on cost accounting beyond what is covered in the classroom.
none;45 minutes;introductory accounting students

INVENTORY METHODS (ltinv;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson is a brief review of inventory evaluation methods through the presentation of several problems in each section.
none;30-45 minutes;introductory accounting students

INVENTORY (PERPETUAL AND INVENTORY ERRORS) (entry3;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson clarifies the difference between perpetual and periodic inventories, illustrates the effect of errors in inventory on cost of goods sold and net income, and tests the student's understanding of the relationship between various elements in an income statement.
none;20-30 minutes;introductory accounting students

JOB-ORDER COSTING (tab3; 1978;unpublished)
McKeown, James C
Department of Accountacy, U of I, Urbana, Ill.
This is to review the elements of job order costing and to give the student practice applying overhead and making the account entries involved in job order costing.
none;60 minutes;introductory accounting students

LONG-TERM INVESTMENTS (ltinve;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop an understanding of the reasons for discount and premium and the methods of calculating amortization and accounting for premium and discounts in relationship to long-term investment in securities. The straight line method of calculating amortization is used.
none;45-60 minutes;introductory accounting students

LONG-TERM LIABILITIES (ltliaba;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the accounting for long-term liabilities from the debtor's point of view. A knowledge of the reasons for and the process of amortization of discount or premium is presumed. The straight line method of calculating amortization is used.
none;20-30 minutes;introductory accounting students

NON-MANUFACTURING COSTS (budget2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the problems and methods of controlling marketing and administrative costs.
none;60 minutes;introductory accounting students

NOTES AND INTEREST (notint;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson familiarizes the student with recording notes and calculating and recording interest and discounts.
none;45-60 minutes;introductory accounting students

OPERATIONAL AND PRODUCTION BUDGETING (budget;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson on operational and production budgeting presents problems in in each of the following areas: economic order quantity, projecting performance, flexible budgeting and formula budgeting. There is no introductory or review material, but help is available.
none;20-30 minutes;managerial accounting students

PROCESS COSTING (cost3;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson is a review of the product costing aspects of cost accounting as used for inventory valuation and income determination and as a basis for pricing.
none;60-90 minutes;introductory accounting students

SPECIAL JOURNALS (sj;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews various special journals and gives the students practice in classifying events using these journals.
none;5-10 minutes;introductory accounting students

STANDARD COSTING II (standard;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson illustrates the application of standard costing and familiarizes students with the analysis and recording of material and labor price (rate) and usage (efficiency) variances.
none;45 minutes;introductory accounting students

TEMPORARY INVESTMENTS (tempinv;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches initial recording of temporary investments, recording revenue from temporary investments, valuation of temporary investments, disposition of temporary investments.
none;45-60 minutes;introductory accounting students

WORKSHEETS (worksheet;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides the student with practice using a worksheet to summarize all accounts with non-zero balances.
none;30-45 minutes;introductory accounting students

Accounts receivable

ACCOUNTS RECEIVABLE (accrec;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches methods of handling some of the problems that occur in the area of accounts receivable: in particular, estimating uncollectable receivables, writing off uncollectable accounts, recording collections of previously written-off accounts and aging accounts receivable.
none;none;introductory accounting students

Acetylene compounds

ALKYNE CHEMISTRY (alkynes;1977;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.
The lesson provides an introduction to the carbon-carbon triple bond acetylenes, known also as alkynes. Information on the structure, nomenclature, preparation and reactions is given.
none;none;college and university students of organic chemistry

Acids, Organic

Amino acids

AMINO ACIDS: STRUCT. AND BIOCHEM. CHARACTER. (mamino;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson has instructional, reference and drill sections which cover the structures, nomenclature, chemistry (e.g., pK, pI, solubility) and biochemistry (e.g., catabolic fate) of the 20 amino acids commonly found in proteins.
none;15 minutes;first year medical students

NATURAL AMINO ACIDS (amino;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is a drill on the names and structures of natural amino acids.
none;42 minutes;college/university students

Carboxylic acid

ESTERS OF CARBOXYLIC ACID (esters;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson is on the preparation and reactions of esters. Experiments are simulated to determine the mechanism of esterification, labeled oxygen exchange and hydrolysis.
none;28 minutes;college/university students

INTRODUCTION TO CARBOXYLIC ACIDS (rcooh;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson deals with carboxylic acids, their structure, nomenclature and acidity.
none;35 minutes;college/university students

PREP. AND REACTIONS OF CARBOXYLIC ACID: PRACTICE PROBLEMS (acidprob;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson offers review problems on the interconversion of acids, esters, amides, acid chlorides and amides.

It does not function without a touch panel.
touch panel;25 minutes;college/university students

PREP. AND REACT.: ACID CHLORIDES, ESTERS, ANHYDRIDES, AMIDES (rcocl;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a review of the reactions involved in the formation of acid chlorides, esters, anhydrides and amides and then numerous practice problems for the student on these derivatives of carboxylic acids.
none;56 minutes;college/university students

Nucleic acids

NUCLEIC ACIDS I: STRUCTURES AND BIOCHEMICAL CHARACTERISTICS (mnuc;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents the nomenclature, properties, structures and uses of the common "bases," nucleosides and nucleotides. Some purine and pyrimidine derivatives with therapeutic uses are also covered. This material is divided into four instructional sections each followed by a set of informative questions.
none;30 minutes;first year medical students

Acids (Chemistry, Analytic)

ACID - BASE TITRATIONS (vucurve;1978;unpublished)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is designed for students in quantitative analysis. It introduces the aspects of acid/base titration curves and the variables which determine the shape of the curves. Both monorotic and diprotic acids are covered along with an introduction to weak bases.
none;60 minutes;chemistry students studying quantitative analysis

Acids (Chemistry, General)

ACID BASE REACTIONS: PRACTICE PROBLEMS (abprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson consists of a series of practice problems on acid-base reactions.
touch panel;13 minutes;college/ university freshmen

ACID-BASE TITRATION (phcurves;1972;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson presents the calculation of H^+ and pH, the titration of weak acids and the titration of diprotic weak acids.
none;17 minutes;students of general chemistry

ACID-BASE TITRATIONS (titrate2;1976;1977)
Smith, Stanley
Department of Chemistry, University of Illinois
The lesson is comprised of a simulated acid-base titration experiment in which the student measures the concentration of a solution of NaOH by titration of a weighed sample of potassium acid phthalate. The solution of NaOH is then used to determine the molecular weight of an unknown acid.
none;20 minutes;college/university students

AMINO ACIDS, PEPTIDES, PROTEINS, AS ACIDS AND BASES (mph3;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the acid-base character of amino acids, peptides and proteins, and examines the concepts of pH, H^+, HA, K', pK' and buffers at the biochemical level.
none;15 minutes;first year medical students

BUFFER PROBLEMS (mph2;1975;unpublished)
Agee, C. Coe; Rende, R J
School of Basic Medical Sciences, Univ. of Illinois
This lesson explains the concept of buffers as it applies to biological systems. It presents the methods for calculating and preparing buffers by titration and by molecular weight. There is a drill in the form of typical buffer problems with randomly generated values for conjugate acid, conjugate base, and pH, for the student to solve.
none;15 minutes;first year medical students

CHEMICAL NOMENCLATURE - NAMING ACIDS AND BASES (chemnom3;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
This is the second lesson in the series of lessons on Chemical Nomenclature. This lesson involves naming acids and bases.
none;none;college/university students

CLINICAL AND PHYSIOLOGICAL ACID-BASE PROBLEMS (mph4;1975;unpublished)

Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois

In this lesson the student encounters common clinical, laboratory and physiological problems, the solutions of which require an understanding of the relationships among pH, H^+, pK', conjugate acid (HA), and conjugate base (A^-).

none;35 minutes;first year medical students

INORGANIC NOMENCLATURE (chemnom;1977;1978)

Moore, Carolynn
Chemistry Department, University of Illinois

The lesson gives instruction in how to name some chemical compounds (ions, salts, acids, and multivalent cations). Practice drills are included. All the material is in one lesson. Similar material by the same author is divided into three lessons which are described separately.

none;39 minutes;college/university students of beginning chemistry

INORGANIC NOMENCLATURE DRILLS (compound;1973;1977)

Grandey, Robert C; Adams, Edward
Computer-based Educ. Res. Lab., University of Illinois

The lesson allows the student to do drills on names and formulas of salts, acids and bases (binary non-metallic compounds). The drills may be designed by instructors, may be standard drills, or may be made up by the student.

none;none;college/university chemistry students

INTRODUCTION TO TITRATIONS (ititm2;1977;1978)

Smith S - Chabay R
Chemistry Department, Univ. of Ill., Urbana, Ill.

The lesson introduces the students to the equations, calulations, and experimental techniques involved in performing titration experiments.

microfiche;52 minutes;college/university students

PH AND ACID-BASE RELATIONSHIPS (mph;1975;unpublished)

Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois

This lesson reviews the concepts of acid and base, pH, and hydrogen ion concentration and derives the Henderson-Hasselbalch equation.

none;30 minutes;first year medical students

Acid-base equilibrium

ACID BASE REACTIONS: PRACTICE PROBLEMS (abprob;1975;1977)

Smith, Stanley
Chemistry Department, University of Illinois

The lesson consists of a series of practice problems on acid-base reactions.

touch panel;13 minutes;college/ university freshmen

ACID-BASE TITRATION (phcurves;1972;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson presents the calculation of H^+, and pH, the titration of weak acids and the titration of diprotic weak acids.
none;17 minutes;students of general chemistry

AMINO ACIDS, PEPTIDES, PROTEINS, AS ACIDS AND BASES (mph3;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the acid-base character of amino acids, peptides and proteins, and examines the concepts of pH, H^+, HA, K′, pK′ and buffers at the biochemical level.
none;15 minutes;first year medical students

BUFFER PROBLEMS (mph2;1975;unpublished)
Agee, C. Coe; Rende, R J
School of Basic Medical Sciences, Univ. of Illinois
This lesson explains the concept of buffers as it applies to biological systems. It presents the methods for calculating and preparing buffers by titration and by molecular weight. There is a drill in the form of typical buffer problems with randomly generated values for conjugate acid, conjugate base, and pH, for the student to solve.
none;15 minutes;first year medical students

CLINICAL AND PHYSIOLOGICAL ACID-BASE PROBLEMS (mph4;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
In this lesson the student encounters common clinical, laboratory and physiological problems, the solutions of which require an understanding of the relationships among pH, H^+, pK′, conjugate acid (HA), and conjugate base (A^-).
none;35 minutes;first year medical students

PH AND ACID-BASE RELATIONSHIPS (mph;1975;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the concepts of acid and base, pH, and hydrogen ion concentration and derives the Henderson-Hasselbalch equation.
none;30 minutes;first year medical students

Acne

PHYSICIAN SELF-ASSESSMENT VIII (psa08;1976;unpublished)
Loeffel, Dorinda; Solomon, Lawrence; Yamada, Mitsuru; et al.
Abraham Lincoln Medical School, Univ. of Illinois

In this doctor's office simulation, a young man comes into the office with severe acne. Several alternative paths are possible, some of which lead to a cure, others to a malpractice suit. Costs are kept and a summary and bibliography follow.

microfiche, optional touch panel;none;medical students

Addition

ADDING AND SUBTRACTING ON THE NUMBER LINE (signum;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson introduces the number line, the negative numbers, and teaches order on the number line. It also teaches a number line model of adding and subtracting signed numbers and includes practice problems.

none;45 minutes;basic mathematics students

ADDING AND SUBTRACTING SIGNED NUMBERS (post;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana IL

This lesson is a model for the operation of addition and subtraction of signed numbers to enable the students to work with statements like +3 - -2 = +5.

none;10 minutes;elementary mathematics students

ADDING DOTS (zdotdot;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Cohen, Paul
U of I NSF Elem. Math. Group, Urbana, Illinois

The lesson is designed to teach the model of addition as putting together sets of objects. It gives practice in expressing addition concepts in mathematical notation. The student learns to draw a picture of an addition number sentence using dots as well as to write an addition number sentence describing the picture of dots.

touch panel;10 minutes;intermediate elementary level

ADDING LENGTHS (zlengths;1976;unpublished)
Weaver, Charles S; Cohen, Paul; Bonetti, William
U of I NSF Elem. Math. Group, Urbana, Illinois

The lesson introduces the student to a model of addition as a combining of lengths. The student is taught how to write an addition number sentence given a picture of sticks laid end to end.

none;10 minutes;intermediate level elementary students

ADDITION CHECK-UP (zaddchk;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Wilson, James H
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson measures the student's ability to work five 2-digit and 3-digit addition problems that require carrying. The material is in one segment which repeats periodically until the student passes.
none;one 10 minute segment repeated until mastered;elementary students

ADDITION OF SIGNED NUMBERS (signadd;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the number line and negative numbers and teaches order on the number line. It also presents a number line model of adding signed numbers and practice problems of the same.
none;35 minutes;basic mathematics students

ADDITION WITH STICKS AND PLACE VALUE WITH STICKS (zbundle;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson is designed to improve the understanding of place value by using a physical model of sticks and bundles ot sticks to describe two digit numbers. The student is shown how to do addition problems quickly by breaking up the numbers using place value.
none;5 ten minute segments;intermediate level elementary students

CARRYING IN ADDITION (zcarry;1976;unpublished)
Steinberg, Esther R; Leiser, David
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson is written to explain the addition algorithm and carrying in terms of sticks and bundles of sticks. At the completion of the lesson the student should be able to do the addition algorithm wih two digit numbers and to understand "carrying" in terms of sticks and bundles of sticks.
none;three ten minute segments;intermediate level elementary students

COLUMN ADDITION (zcolumn;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Steinberg, Esther R; et al.
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson introduces the technique of column addition by grouping numbers in order to add them. It provides practice in adding columns of numbers and in finding errors in column additions.
touch panel;open-ended;intermediate level elementary students

EXERCISES -- ADDING AND SUBTRACTING (signprac;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides drill practice in adding and subtracting signed numbers and a posttest for these skills.
none;30 minutes;basic mathematics students

HAPPY ADDITION (wmg09;1977;1977)
Vretblad, Orjon; Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This is the final arithmetic exercise in the series of elementary lessons, "wmg01" - "wmg09". This lesson presents problems in addition assisted by an animated happy face.
none;no data;first grade school children and up

MENTAL ARITHMETIC (wmg01; 1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
The program presents mental arithmetic problems involving addition, subtraction and multiplication. The problems are grouped according to difficulty. The student races against time. The solution time may be varied by the teacher and the computer then speeds up the allocated time as the participant becomes more proficient.
none;open-ended;elementary school children

MIXED DRILL + - × ÷ (wmg08;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides practice with addition, subtraction, multiplication and division.
none;none;elementary school children

NUMBER ACCUMULATOR (accum;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This is a lesson which allows the student to practice adding and subtracting numbers to equal the number given by PLATO.
touch panel;open-ended;elementary mathematics students

PROBLEM MACHINE (zpmachine;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson helps the student understand the addition and subtraction algorithms by showing him incorrect problems and having him adjust one of the numbers in the problem to make it correct.
none;open-ended;intermediate level elementary students

SKIP COUNTING (wmg05;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This program is an exercise in counting by 5's, or other numbers. Three levels of difficulty are offered the student.
none;none;elementary school children

SPACE PORT (port;1975;1978)
Dugdale, Sharon
U of I NSF Elem. Math. Group, CERL
The lesson provides experience with easy function rules.
none;open-ended;primary grade students

Addition reactions

SOME ADDITION REACTIONS OF ALDEHYDES AND KETONES (ketone;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is in two parts. The first part contains a simulated experiment to determine the mechanism of cyanohydrin formation. It deals with hemiacetals, acetals, etc. The experimental determination of the pH rate profile for oxime formation is illustrated and the formation of phenylhydrazone and DNP formation is included.
none;42 minutes;college/university students

Adenosine triphosphate synthesis

RESPIRATION AND ENZYMES (respir;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the general scheme of glycolysis, Krebs cycle and electron transport. It also helps the student to understand the relationship of glycolysis to aerobic respiration.
none;45 minutes;college/university students

Adrenal steroids

see Adrenocortical hormones

Adrenergic mechanisms

AUTONOMIC PHARMACOLOGY: ADRENERGIC AGENTS (autotut;1975;unpublished)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson covers various noradrenergic synaptic processes, including norepinephrine synthesis, granular storage, terminal release and re-uptake, catabolism and receptor interaction. The sequence of questions/information is dependent on student performance. Clinically pertinent information is used to reinforce concepts.
none:30 minutes:first year medical students

AUTON. PHARMACOL.: ADRENERGIC MECHANISMS AND USES (kumc13;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson treats the effects of adrenergic stimulating and blocking agents. The concept of alpha and beta adrenergic receptors is included.
none;10 minutes;first year medical students

Adrenocortical hormones

DRUGS: ADRENAL STEROIDS (kumc43;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson first reviews some diseases of hyper- and hypothyroidism, then discusses the therapeutic use of steroid drugs in their treatment.
none;10 minutes;first year medical students

Aeronautical and astronautical engineering

ELEMENTARY AEROSPACE ENGINEERING GAMES (aerogames;1976;1977)
Bennett, James A; Bennett, Carol D
University of Illinois
A series of games that illustrate the types of problems that face aerospace engineers. Two types of problems are presented: airplane and spacecraft.
none;open-ended;general

Aeronautics

AIRCRAFT TAKE OFF AND LANDING PERFORMANCE ANALYSIS (aero3;1979;1980)
Everett, Kenneth N
Comp.-based Educ. Res. Lab., Univ. of Illinois
This lesson provides utilities for analyzing data provided by the user dealing with flight vehicles. Graphs and tables presenting take off or landing distance are generated from the data provided versus the flight characteristic of lift coefficient.
none;open-ended;freshmen aeronautics students

PRIVATE PILOT - WRITTEN EXAMINATION STUDY GUIDE (flight;1978;1979)
Trollip, Stanley R; Entwistle, William C; Treichel, Curt W
Institute of Aviation, U of I, Urbana, Illinois
This lesson allows the student pilot to practice taking the written examination for private pilot. The user may choose to take a quiz over one major category, a quiz over one or more subcategories, or a general quiz over all categories.
handout available: UI Aviation Res. Lab.;open-ended;student pilots

SEQUENCE REPORTS (weather;1976;1977)
Lombardo, David A
University of Illinois
The lesson teaches how to determine existing weather at the starting point, enroute and at the terminal point of a proposed plane trip by reading and correctly interpreting weather teletype information broadcast by the FAA.
none;none;general

WIND TRIANGLES (wind;1978;unpublished)
Trollip, Stanley R
Institute of Aviation, U of I, Urbana, Illinois
This lesson describes the E6b Computer used to solve wind triangle problems and presents problems for practice.
none;none;students of aviation

Aeronautics--Examinations, questions, etc.

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Trollip, Stanley R; Entwistle, William C; Treichel, Curt W
Institute of Aviation, U of I, Urbana, Illinois
This lesson allows the student pilot to practice taking the written examination for private pilot. The user may choose to take a quiz over one major category, a quiz over one or more subcategories, or a general quiz over all categories.
handout available: UI Aviation Res. Lab.;open-ended;student pilots

Aeroplanes

ELEMENTARY AEROSPACE ENGINEERING GAMES (aerogames;1976;1977)
Bennett, James A; Bennett, Carol D
University of Illinois
A series of games that illustrate the types of problems that face aerospace engineers. Two types of problems are presented: airplane and spacecraft.
none;open-ended;general

Aeroplanes--Piloting

PRIVATE PILOT - WRITTEN EXAMINATION STUDY GUIDE (flight;1978;1979)
Trollip, Stanley R; Entwistle, William C; Treichel, Curt W
Institute of Aviation, U of I, Urbana, Illinois
This lesson allows the student pilot to practice taking the written examination for private pilot. The user may choose to take a quiz over one major category, a quiz over one or more subcategories, or a general quiz over all categories.
handout available: UI Aviation Res. Lab.;open-ended;student pilots

WIND TRIANGLES (wind;1978;unpublished)
Trollip, Stanley R
Institute of Aviation, U of I, Urbana, Illinois
This lesson describes the E6b Computer used to solve wind triangle problems and presents problems for practice.
none;none;students of aviation

Africa

see Geography, African

Description, geography

WELCOME TO AFRICA (africanc;1975;1979)
Conkright, Jan; Conkright, Tom
Dept. of Linguistics, U of I, Urbana, Illinois
This is a practice lesson on African culture which discusses African cultural groups, African geography, and the naming ceremony.
touch panel;none;persons interested in the study of African culture

African trypanosomiasis

MEDICAL PARASITOLOGY VIII: AFRICAN TRYPANOSOMIASIS (trypl; 1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson teaches, and where applicable, compares the general morphological characteristics, the life cycle, laboratory diagnosis, pathogenicity, symptomatology and treatment of Rhodesian and Gambian sleeping sickness. Sectional materials (e.g. treatment) are textual with inserted questions.
none;15 minutes;first year medical students

Agriculture--Economic aspects

AGRICULTURAL EXPENDITURE MODEL (foodindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using agricultural expenditure variables can be graphed. A list of available regions is provided and the variables and parameters can be changed for each projection.
none;open-ended;persons studying populations

Air warfare games

AIRFIGHT (airfight;1976;1976)
Fortner, Brand
Comp.-based Educ. Res. Lab., Univ. of Ill.
A game of three-dimensional combat simulation in which a dogfight is staged among jet fighters. The object of the game is to shoot down a member of the opposing team.
none;open-ended;general

DOGFIGHT (dogfight;1976;1977)
Green, Douglas Jay; White, Lawrence A
Comp.-based Educ. Res. Lab., University of Illinois
An interterminal air war game in which one player flies a small plane and tries to shoot down his opponent's plane. Each move is 45° which is the range between the arrow keys. The speed of moving the plane is dependent on how fast the arrow keys are pressed. A fast press is a tight turn, a slow press is a slow turn.
none;open-ended;general

FISHWAR (fishwar;1976;1977)
Berger, Michael; Frye, G. David; Little, Todd
University of Illinois, Urbana, IL
Fishwar is an interterminal airwar simulation in which two players try to shoot each other down.
none;open-ended;general

MOONWAR (moonwar;1973;1977)
Bloomfield, Louis
Urbana High School, Urbana IL
This is an interterminal warfare game in which one player challenges another player to shoot down a target with a laser beam. The player first to manoeuver into a position so that he can call the angle of his shot correctly to hit the target wins. The laser bounces off the smooth walls of the screen, but not off the four rough mountains in his way.
none;open-ended;anyone

SPACE WAR (spacewar;1978;unpublished)
Blomme, Richard W
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This is a space warfare game to be played between two terminals. The players' ships are represented by X and O; the ship's speed, direction and firing is manipulated by the keyset.
none;open-ended;anyone

STARFIGHT (starfight;1977;1978)
Anderer, David G; Laubach, Mark
PLATO Project, University of Delaware, Newark, Del
The game, "starfight", must be played on a programmable PLATO terminal. It involves two ships, the Glassors and the Errows. Each ship can fire torpedos at each other. The first player to get 7 kills wins. The players manipulate the directions of their ships as well as the detonation of the torpedos by keys on the keyset.
programmable plato terminal required;open-ended;any age

Airplanes
see Aeroplanes

Airway (Medicine)
UPPER AIRWAY DISEASE (shp96;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson defines upper airway disease, identifies disease processes that are associated with specific anatomical areas of the upper respiratory tract and describes the etiology of upper airway disease, the diagnostic features of the disease processes and the treatment.
This lesson requires 35mm slides.;2 hours;physicians' assistants

Alcohol in the body

ALCOHOLISM: A PHARMACOLOGIC OVERVIEW (booze2;1976;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois

The lesson (linear instructional format) is on the pharmacology and toxicology of chronic excess usage of ethanol. Topical areas (indexable) presented include major pharmacologic effects of chronic ingestion of ethanol on major body systems; ethanol tolerance and dependence symptoms of withdrawal from chronic usage; pharmacologic treatments used.

none;30 minutes;first year medical students

THE PHARMACOLOGY OF ETHANOL (booze1;1976;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois

This is a linear instructional lesson on the pharmacology of ethanol. Topical areas include: major effects on the CNS, CVS, GI tract, liver, kidney, and endocrine system: adsorption, distribution, metabolism, and elimination of ethanol.

none;25 minutes;first year medical students

Alcoholism

ALCOHOLISM: A PHARMACOLOGIC OVERVIEW (booze2;1976;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois

The lesson (linear instructional format) is on the pharmacology and toxicology of chronic excess usage of ethanol. Topical areas (indexable) presented include major pharmacologic effects of chronic ingestion of ethanol on major body systems; ethanol tolerance and dependence symptoms of withdrawal from chronic usage; pharmacologic treatments used.

none;30 minutes;first year medical students

Alcohols

ALCOHOLS (roht;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson teaches the common and IUPAC names of alcohols. It discusses the preparation by reduction of C=O, hydration, hydroboration, hydrolysis of HX, and Grignard additions. The reactions included are: oxidation, conversion to RX, dehydration, salt and ether formation.

none;89 minutes;college/university students

PREPARATION AND REACTIONS OF ALCOHOLS: PRAC. PROBLEMS (rohprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The student is given practice problems to solve associated with the preparation and reactions of alcohols.

touch panel;29 minutes;college/ university students

Aldol condensation

REACTIONS OF ALDEHYDES AND KETONES (PART 2) (ketone2;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson continues the discussions of reactions of aldehydes and ketones.The subjects include enolization, H-D exchange, halogenation of ketones, and aldol condensation reactions with appropriate problems.

none;55 mminutes;college/university students

Algae

PLANT LIFE CYCLES (cycles;1974;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.

This lesson constructs a diagram of a generalized plant life cycle, discusses the relationship between gametophyte and sporophyte generations and illustrates how this relationship differs throughout the plant kingdom, with special emphasis on its evolutionary significance.

microfiche;90 minutes;college/university students

Algebra

BATTLESHIP (ccbattle;1976;1978)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois

The lesson provides remediation on plotting points if student fails the checkup in -ccttest-.

none;30 minutes;intermediate algebra students

BINOMIAL PRODUCTS: $(a+b)(a-b)$ (park2;1976;unpublished)
Thompson, Paul; Baillie, Robert
Community College Math Group, CERL, Univ. of Ill.

This lesson provides instruction and practice in binomial products.

none;60 minutes;high school and above

COLLECTING LIKE TERMS (collect;1976;1978)
Weaver, Tamar A; Baillie, Robert
Comp.-based Educ. Res. Lab., University of Illinois

This lesson introduces the following terminology: like terms, x-term, constant, and provides practice in simplifying algebraic expressions by collecting like terms.

"collectp" is a version of the same lesson but designed for addition only.

none;25 minutes;elementary algebra students

THE DISTRIBUTIVE LAW (dist;1976;1978)
Weaver, Tamar A; Baillie, Robert
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a graphic model for the distributive law and practice on the distributive law with signed numbers and variables.
none;30 minutes:elementary algebra students

EQUATIONS - COMBINING AND COLLECTING LIKE TERMS (eqsimp;1976;1978)
Bailey, Keith; Lassner, David
Community College Math. Group, CERL, Univ. of Ill.
The student is led through the steps of combining and collecting like terms in an equation and ends with the rule applying to the operation after he has given the correct answer. He then tries similar problems.
none;total equation series = 3.5 hours;high school and above

FACTORING QUADRATIC POLYNOMIALS (quad2;1976;1978)
DiBello, Louis V
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides drill practice in factoring quadratic polynomials.
none;60 minutes;intermediate algebra students

FINDING THE LEAST COMMON MULTIPLE (addfrac;1976;1978)
Bailey, Keith; Baillie, Robert; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
The lesson defines multiple of a number and gives practice in finding and listing the multiples of a number. Then it defines the least common multiple of two numbers and shows several methods for finding it -- including listing multiples of each of the numbers, and using prime factorization.
none;30 minutes;basic mathematics students

FRACTIONS ON THE NUMBER LINE (rfrac;1976;1978)
Bailey, Keith
Comp.-based Educ. Res. Lab., Univerity of Illinois
This lesson teaches how to locate fractions on the number line and shows how this model can be used for comparing ing fractions, determining equivalent fractions and converting improper fractions to mixed numbers. It also demonstrates the relationship between division and fractions.
none;40 minutes;basic mathematics students

FUNCTION PLOTTER (ccplot;1976;1978)
Bailey, Keith; Sleator, Daniel
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a function plotter for mathematics students to use.
none;open-ended;mathematics students, high school and above

GRAPHING ANY LINE IN THE FORM $y = mx + b$ (line3;1975;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
The lesson provides practice in using the slope and intercept to find the equation of a given straight line or to graph a given linear equation.
none;30 minutes;students of intermediate algebra

GRAPHING LINES IN THE FORM $ax + by + c = 0$ (line5;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson enables the student to convert a linear equation in the form $ax + by + c = 0$ to the form $y = mx + b$ and thereby identify its slope and intercept and be able to graph it.
none;60 minutes;intermediate algebra students

GRAPHING STRAIGHT LINES -- TABLES OF VALUES (line1;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and practice in getting a table of values satisfying a given equation of the form $y = mx + b$, and using it to graph the corresponding straight line.
none;30 minutes;intermediate algebra students

HOW TO PLOT POINTS (remttt;1976;1978)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides remediation in plotting points for students who have failed the checkup in =cctttest= several times.
none;30 minutes;intermediate algebra students

HOW TO WRITE SOLUTIONS TO SYSTEMS OF EQUATIONS (simequla;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides direction and practice in typing in solutions to the three types of systems.
none;15 minutes;intermediate algebra students

INDEPENDENT SYSTEMS OF EQUATIONS AND NUMBERS OF SOLUTIONS (simequl;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson familiarizes the student with the geometry (graphs) of three different types of systems: independent, inconsistent, and dependent as well as the number of solutions for each type.
none;30 minutes;intermediate algebra students

INTERCEPT OF STRAIGHT LINES (line2;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the y-intercept and provides instruction and practice in finding it from the graph of a linear equation.
none;15 minutes;intermediate algebra students

INTRODUCTION TO ALGEBRAIC METHODS OF SOLVING 2 × 2 SYSTEMS (simequ3;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides motivation for learning algebraic methods for solving systems of equations and promotes an understanding of why the methods work through the use of graphs.
none;30 minutes;intermediate algebra students

INTRODUCTION TO EQUATIONS - TRUE OR FALSE (eqintro;1976;1978)
Bailey, Keith; Lassner, David
Community College Math. Gorup, CERL, Univ. of Ill.
In this lesson the student is first taught how to determine if an equation involving numbers is true or false. Then he learns to tell if a number is a solution or not a solution of an equation involving the variable, x. The lesson ends with a quiz which must be mastered to consider the lesson finished.
none;3.5 hours for complete equation series;high school and above

INTRODUCTION TO SETS (ccset;1976;1978)
Weaver, Tamar A; DiBello, Louis V
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides an introduction to set theory including a discussion of sets, subsets, elements of a set, and the three operations: union, intersection, and complementation.
none;20 minutes;intermediate algebra students

INTRODUCTION TO SYSTEMS OF EQUATIONS (simequ;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illiinois
This lesson provides an introduction to systems of linear equations with emphasis on the geometric meaning of the solution to a 2 × 2 system.
none;15 minutes;intermediate algebra students

THE LINES $y=c$ AND $x=c$ (line4;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the lines $y = b$ and $x = c$ and drills the student in graphing any such equation and in finding the equation of any horizontal or vertical line.
none;30 minutes;intermediate algebra students

MATH. FOR COMMUNITY COLLEGES AND ADULT EDUCATION (mathcc;1976;unpublished)
Community College Math. Group
Computer-based Edcuation Research Lab., Univ. of Ill.
The program is the index program for a series of lessons written for Community Colleges and Adult Education under a grant from the National Science Foundation. Lessons are available in Arithmetic, Algebra and Graphing, Geometry, Measurement and Trigonometry, and Probability.
none;variable;community college and adult education students

MULTIPLICATION OF BINOMIALS (quad1;1976;1978)
DiBello, Louis V; Community College Math. Group
Comp.-based Educ. Res. Lab., University of Illinois
The lesson presents a step by step sample guide to the multiplication of binomials and then presents problem drills for three types of products.
none;45 minutes ;high school and above

PLOTTING POINTS CHECKUP (cctttest;1976;1978)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a checkup on the student's ability to plot points.
none;15 minutes;intermediate algebra students

POINT-SLOPE FORM (linela;1976;1978)
Lederman, Barbara; Bailey, Keith; McFadden, LaVerne; et al.
Comp.-based Educ. Res. Lab., University of Illinois
Given two points or one point and the slope, the student will be able to write an equation of the corresponding line.
none;30 minutes;intermediate algebra students

PRIME FACTORIZATION OF WHOLE NUMBERS (primefac;1975;1978)
Bailey, Keith
Comp.-based Educ.Res. Lab., U of I, Urbana, Ill.
This lesson shows the student how to find the prime factors of natural numbers and defines prime numbers.
none;35 minutes;elementary algebra students

SLOPE OF A LINE (line2a;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the slope and provides instruction and practice in finding it from the graph of a linear equation.
none;30 minutes;intermediate algebra students

SOLVING QUADRATIC EQUATIONS BY FACTORING (quad3;1976;1978)
DiBello, Louis V; Community College Math. Group
Comp.-based Educ. Res. Lab., University of Illinois
This lesson concerns the solving of quadratic equations by factoring. The student can go through a guide to drills and then is given sets of problems of four types to solve.
none;60 minutes;students of intermediate algebra

SOLVING 2 × 2 SYSTEMS BY GRAPHING (simequ2;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction in solving 2 × 2 linear systems by graphing.
none;30 minutes;intermediate algebra students

SOLVING 2 × 2 SYSTEMS BY SUBSTITUTION (simequ4;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and exercises in solving 2 × 2 systems of linear equations using the substitution method.
none;45 minutes;intermediate algebra students

SOLVING 2 × 2 SYSTEMS BY THE ADDITION-SUBTRACTION METHOD (simequ5;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and exercises in solving 2 × 2 systems of linear equations using the addition-subtraction method (this method is also known as the method of linear combinations).
none;45 minutes;intermediate algebra students

THINK OF A NUMBER (zthinkof;1976;unpublished)
Steinberg, Esther R
U of I NSF Whole number Elem. Math. Group
The lesson introduces the student to the process of generating and solving algebra problems with one unknown in a concrete setting.
none;two 10 minute segments, repeatable; elem. students

TIC-TAC-TOE (cctttt;1976;unpublished)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches plotting points on a grid by using a tic-tac-toe game format.
none;30 minutes;intermediate algebra students

Algebra, Boolean

COMPUTER LOGIC AND DIGITAL CIRCUITRY (logic;1976;unpublished)
Whisenhunt, Gary; Wood, Ray
Southern Illinois University, Carbondale, IL
The lesson is an elementary digital logic lesson covering number systems, binary numbers, flip flops, logical operators, and boolean algebra.
none;variable;college/university students

MANIPULATING LOGICAL EXPRESSIONS (minbool;1975;1977)
Meller, David V
Comp.-based Educ. Res. Lab., University of Illinois
This is a utility program. It introduces the concepts of simplification and minimization and allows simplification or minimization of logical expressions. It does not provide an introduction to Boolean Algebra. It assumes that the student can write Boolean expressions.
none;open-ended;college/university

Algebra, Matrix

see Matrices

Algebra--Problems, exercises, etc.

BATTLESHIP (ccbattle;1976;1978)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
The lesson provides remediation on plotting points if student fails the checkup in =cctttest=.
none;30 minutes;intermediate algebra students

BINOMIAL PRODUCTS: (a+b)(a-b) (park2;1976;unpublished)
Thompson, Paul; Baillie, Robert
Community College Math Group, CERL, Univ. of Ill.
This lesson provides instruction and practice in binomial products.
none;60 minutes;high school and above

COLLECTING LIKE TERMS (collect;1976;1978)
Weaver, Tamar A; Baillie, Robert
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the following terminology: like terms, x-term, constant, and provides practice in simplifying algebraic expressions by collecting like terms.

"collectp" is a version of the same lesson but designed for addition only.
none;25 minutes;elementary algebra students

THE DISTRIBUTIVE LAW (dist;1976;1978)
Weaver, Tamar A; Baillie, Robert
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a graphic model for the distributive law and practice on the distributive law with signed numbers and variables.
none;30 minutes;elementary algebra students

EXERCISES ON SOLVING 2 × 2 SYSTEMS OF EQUATIONS (simequ6;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides practice in solving each type of 2 × 2 system of linear equations: independent, inconsistent, and dependent.
none;15 minutes, minimum;intermediate algebra students

FACTORING QUADRATIC POLYNOMIALS (quad2;1976;1978)
DiBello, Louis V
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides drill practice in factoring quadratic polynomials.
none;60 minutes;intermediate algebra students

FINDING THE LEAST COMMON MULTIPLE (addfrac;1976;1978)
Bailey, Keith; Baillie, Robert; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
The lesson defines multiple of a number and gives practice in finding and listing the multiples of a number. Then it defines the least common multiple of two numbers and shows several methods for finding it -- including listing multiples of each of the numbers, and using prime factorization.
none;30 minutes;basic mathematics students

FRACTIONS ON THE NUMBER LINE (rfrac;1976;1978)
Bailey, Keith
Comp.-based Educ. Res. Lab., Univerity of Illinois
This lesson teaches how to locate fractions on the number line and shows how this model can be used for comparing ing fractions, determining equivalent fractions and converting improper fractions to mixed numbers. It also demonstrates the relationship between division and fractions.
none;40 minutes;basic mathematics students

FUNCTION PLOTTER (ccplot;1976;1978)
Bailey, Keith; Sleator, Daniel
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a function plotter for mathematics students to use.
none;open-ended;mathematics students, high school and above

GRAPHING ANY LINE IN THE FORM $y = mx + b$ (line3;1975;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
The lesson provides practice in using the slope and intercept to find the equation of a given straight line or to graph a given linear equation.
none;30 minutes;students of intermediate algebra

GRAPHING LINES IN THE FORM $ax + by + c = 0$ (line5;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson enables the student to convert a linear equation in the form $ax + by + c = 0$ to the form $y = mx + b$ and thereby identify its slope and intercept and be able to graph it.
none;60 minutes;intermediate algebra students

GRAPHING STRAIGHT LINES -- TABLES OF VALUES (line1;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and practice in getting a table of values satisfying a given equation of the form $y = mx + b$, and using it to graph the corresponding straight line.
none;30 minutes;intermediate algebra students

HOW TO PLOT POINTS (remttt;1976;1978)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides remediation in plotting points for students who have failed the checkup in =cctttest= several times.
none;30 minutes;intermediate algebra students

HOW TO WRITE SOLUTIONS TO SYSTEMS OF EQUATIONS (simequla;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides direction and practice in typing in solutions to the three types of systems.
none;15 minutes;intermediate algebra students

INTERCEPT OF STRAIGHT LINES (line2;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the y-intercept and provides instruction and practice in finding it from the graph of a linear equation.
none;15 minutes;intermediate algebra students

INTRODUCTION TO ALGEBRAIC METHODS OF SOLVING 2 × 2 SYSTEMS (simequ3;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides motivation for learning algebraic methods for solving systems of equations and promotes an understanding of why the methods work through the use of graphs.
none;30 minutes;intermediate algebra students

INTRODUCTION TO SETS (ccset;1976;1978)
Weaver, Tamar A; DiBello, Louis V
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides an introduction to set theory including a discussion of sets, subsets, elements of a set, and the three operations: union, intersection, and complementation.
none;20 minutes;intermediate algebra students

THE LINES $y = b$ AND $x = c$ (line4;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the lines $y = b$ and $x = c$ and drills the student in graphing any such equation and in finding the equation of any horizontal or vertical line.
none;30 minutes;intermediate algebra students

MULTIPLICATION OF BINOMIALS (quad1;1976;1978)
DiBello, Louis V; Community College Math. Group
Comp.-based Educ. Res. Lab., University of Illinois
The lesson presents a step by step sample guide to the multiplication of binomials and then presents problem drills for three types of products.
none;45 minutes ;high school and above

PLOTTING POINTS CHECKUP (cctttest;1976;1978)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a checkup on the student's ability to plot points.
none;15 minutes;intermediate algebra students

POINT-SLOPE FORM (linela;1976;1978)
Lederman, Barbara; Bailey, Keith; McFadden, LaVerne; et al.
Comp.-based Educ. Res. Lab., University of Illinois
Given two points or one point and the slope, the student will be able to write an equation of the corresponding line.
none;30 minutes;intermediate algebra students

POSTTEST FOR SIMULTANEOUS EQUATIONS (simtest;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a posttest for the sequence of PLATO lessons on simultaneous equations.
none;15-20 minutes;intermediate algebra students

PRIME FACTORIZATION OF WHOLE NUMBERS (primefac;1975;1978)
Bailey, Keith
Comp.-based Educ.Res. Lab., U of I, Urbana, Ill.
This lesson shows the student how to find the prime factors of natural numbers and defines prime numbers.
none;35 minutes;elementary algebra students

SLOPE OF A LINE (line2a;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the slope and provides instruction and practice in finding it from the graph of a linear equation.
none;30 minutes;intermediate algebra students

SOLVING QUADRATIC EQUATIONS BY FACTORING (quad3;1976;1978)
DiBello, Louis V; Community College Math. Group
Comp.-based Educ. Res. Lab., University of Illinois
This lesson concerns the solving of quadratic equations by factoring. The student can go through a guide to drills and then is given sets of problems of four types to solve.
none;60 minutes;students of intermediate algebra

SOLVING 2 × 2 SYSTEMS BY GRAPHING (simequ2;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction in solving 2 × 2 linear systems by graphing.
none;30 minutes;intermediate algebra students

SOLVING 2 × 2 SYSTEMS BY SUBSTITUTION (simequ4;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and exercises in solving 2 × 2 systems of linear equations using the substitution method.
none;45 minutes;intermediate algebra students

SOLVING 2 × 2 SYSTEMS BY THE ADDITION-SUBTRACTION METHOD (simequ5;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and exercises in solving 2 × 2 systems of linear equations using the addition-subtraction method (this method is also known as the method of linear combinations).
none;45 minutes;intermediate algebra students

TIC-TAC-TOE (ccttt;1976;unpublished)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches plotting points on a grid by using a tic-tac-toe game format.
none;30 minutes;intermediate algebra students

Aliphatic compounds

THE GREAT SYNTHESIS RACE (syng;1973;1977)
Smith S - Chabay R
Chemistry Department, University of Illinois
This is a multistep synthesis game in which two players race to perform a multistep aliphatic synthesis from randomly chosen materials. There are a mono ("syng") and a two-terminal ("syng2") version of the game. The synthesis involves the use of Grignard reactions and simple alcohol-carbonyl group interconversions.
none;66 minutes;college/university students

INTRODUCTION TO CARBOXYLIC ACIDS (rcooh;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson deals with carboxylic acids, their structure, nomenclature and acidity.
none;35 minutes;college/university students

Alkenes

ALKENE CHEMISTRY (alkenet;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson on alkene chemistry discusses the structure, nomenclature, hydrogenation, bromination and hydroboration of alkenes, and includes animations of and simulated experiments on alkene reactions.
touch panel;44 minutes;college/university students

PREPARATION AND REACTIONS OF ALKENES (eneprob;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
Practice problems are presented for reactions associated with the preparation and additions to alkenes. The student is given a group of compounds and reagents and must find interconversions between them by touching the corresponding reactant, reagent and product.
touch panel;28 min;college/ university students

Alkynes

see Acetylene compounds

Allergy

ALLERGENS--THEIR NATURE AND DISTRIBUTION (shp75;1975;unpublished)
Roseman, Gerald J
Sheppard Air Force Base, Texas
In this lesson the student will learn what substances are allergens, where allergens are commonly found, when people are exposed to allergens and how response to allergens varies.
none;30-45 minutes;physicians' assistants

ALLERGY MECHANISM AND BASIC ALLERGY TERMINOLOGY (shp49;1975;unpublished)
Roseman, Gerald J
Sheppard Air Force Base, Texas
This lesson will enable the student to become familiar with the terminology used to describe the allergy mechanism, to differentiate between stages of this mechanism and to name the tissues affected in allergy and their physiological response.
none;90 minutes;physicians' assistants

CYTOTOXIC HYPERSENSITIVITY (mdimmum;1975;unpublished)
Kessel, Ross; Wagner, Kenneth; Cohen, Barry; et al.
University of Maryland and University of Illinois
This lesson deals with cytotoxic (Type II) hypersensitivity. It covers the mediators and the mechanisms of cytotoxic hypersensitivity as well as the laboratory investigation, management and pathology of some cytotoxic disease states.
none;30 minutes;first year medical students

MOUNTING IMMUNE RESPONSES (immuresp;1978;unpublished)
Kessel, Ross; Rivera, David
University of Maryland and University of Illinois
This lesson covers the basics of the immune response, including the mediators (ab and lymphocytes), antibody synthesis, cell mediated immunity and immunotolerance.
none;none;first year medical students

Amebiasis

THE CASE OF THE AILING ALIEN (montezuma;1978;unpublished)
Blecka, Lawrence J; Nelson, Charles D
Abraham Lincoln Medical School, Univ. of Illinois
In this simulation, Jose Amateo comes into the office with his cousin Pedro as translator. Jose has just arrived from rural Mexico within the past few days and has stomach pains, diarrhea and other discomfort. The student must gather history, lab and physical data, make a diagnosis, and treat the patient.
microfiche;none;medical students

CHEMOTHERAPY OF AMEBIASIS (amoeba;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for Entamoeba histolytica infection. It includes modes of action, toxicities and contraindications. Questions are incorporated for interaction.
optional touch panel;20 minutes;first year medical students

American trypanosomiasis

see Chagas' disease

Amines

PREPARATION AND REACTIONS OF AMINES (amines;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
Preparation and reactions of amines with problems.
none;none;college/university students

PREPARATION AND REACTIONS OF AMINES - PRAC. PROBLEMS (amineprob;1976;1978)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson gives the student practice in using some of the reactions associated with the preparation and reactions of aliphatic amines.
touch panel;20 minutes;college/university students

Amino acids

AMINO ACIDS, PEPTIDES, PROTEINS, AS ACIDS AND BASES (mph3;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the acid-base character of amino acids, peptides and proteins, and examines the concepts of pH, H^+, HA, K', pK' and buffers at the biochemical level.
none;15 minutes;first year medical students

AMINO ACIDS: STRUCT. AND BIOCHEM. CHARACTER. (mamino;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson has instructional, reference and drill sections which cover the structures, nomenclature, chemistry (e.g., pK, pI, solubility) and biochemistry (e.g., catabolic fate) of the 20 amino acids commonly found in proteins.
none;15 minutes;first year medical students

NATURAL AMINO ACIDS (amino;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is a drill on the names and structures of natural amino acids.
none;42 minutes;college/university students

Amoeba

CHEMOTHERAPY OF AMEBIASIS (amoeba;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for Entamoeba histolytica infection. It includes modes of action, toxicities and contraindications. Questions are incorporated for interaction.
optional touch panel;20 minutes;first year medical students

MEDICAL PARASITOLOGY II: PATHOGENIC AMOEBAE (ameba2;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
In addition to general amoebae characteristics, the lesson covers the morphology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment of pathogenic amoebae belonging to the genera Dientamoeba, Entamoeba, and Naegleria in an interrogative linear format. A review quiz over commensal and/or pathogenic amoebae is available.
none;none;none

MEDICAL PARASITOLOGY I: COMMENSAL AMOEBAE (ameba1; 1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
In addition to information on general amoebae characteristics, the lesson covers the morphology, life cycle, laboratory diagnosis, pathogenicity, symptomatology and treatment, where necessary, of amoebae often found in man and confused with pathogenic species. The commensal amoebae genera: Endolimarc, Entamoeba and Iodamoeba, are described.
none;10 minutes;first year medical students

Amortization deductions

LONG-TERM INVESTMENTS (ltinve;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop an understanding of the reasons for discount and premium and the methods of calculating amortization and accounting for premium and discounts in relationship to long-term investment in securities. The straight line method of calculating amortization is used.
none;45-60 minutes;introductory accounting students

LONG-TERM LIABILITIES (ltliaba;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the accounting for long-term liabilities from the debtor's point of view. A knowledge of the reasons for and the process of amortization of discount or premium is presumed. The straight line method of calculating amortization is used.
none;20-30 minutes;introductory accounting students

Amplifiers (Electronics)

THE THREE AMPLIFIER BIQUAD FILTER (filters;1977;unpublished)
Fries, Keith L
Dept. of Electrical Engineering, Univ. of Illinois
This lesson will investigate the three amplifier biquad low-pass filter which is considered because of its flexibility, low sensitivity and ease of tuning.
none;none;advanced electrical engineering students

Analgesics

CNS PHARMACOLOGY: ANALGESIA REVIEW (kumc32;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses morphine-type analgesic agents.
none;15 minutes;first year medical students

CNS PHARM.: ASPIRIN-TYPE ANALGESICS & ANTI-INFLAM. AGENTS (kumc28;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the analgesic and anti-inflammatory effects of salicylates and other aspirin-type agents.
none;20 minutes;first year medical students

Analysis of variance

ANALYSIS OF VARIANCE (anova;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois
The purpose of this lesson is to introduce the concepts that are incorporated within the analysis of variance technique. Analysis of variance is a procedure by which the user can perform a test of significance among a set of means taken together to test whether the means are significantly different from one another.
none;none;college/university students

Anatomy, Human

ANATOMICAL REFERENCE TERMINOLOGY (shp56;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson will teach the student to name the "standard position" of the body for proper anatomical reference, the correct anatomical reference terms based upon descriptive phrases displayed with appropriate drawings, and the three anatomical "planes of reference". A "matching drill" of twelve anatomical reference definitions is included.
none;20-30 minutes;physicians' assistants

ANATOMY OF THE BRAINSTEM (med1;1978;unpublished)
Lehr, Robert P; Wong, Did (Ben); Farney, Thomas L
Southern Illinois University School of Medicine
This lesson consists of 11 exercises, each of which is a cross-section of the brainstem. The student is asked to identify structures in the cross-sections as they are randomly presented.
none;none;first year medical students

ANATOMY OF THE STOMACH (stomach;1976;unpublished)
Capek, Michael
Southern Illinois University and University of Illinois
The lesson presents quizzes and drills on the gross and microscopic anatomy of the human stomach.
none;45 minutes;health science students and students of biology

EYE Q - A REVIEW AND SELF-QUIZ ON EYE ANATOMY (eyeq;1974;1978)
Silver, John; Helper, Lloyd C
College of Veterinary Medicine, Univ. of Illinois
This lesson presents a review of the anatomy of an eye by drawing and labelling a large cross section of an eye. The student can request the name of any labelled part. When he has sufficiently learned the parts, the student can take a quiz by naming the part corresponding to the label indicated by the computer.
none;15-30 minutes;Students of veterinary medicine

GROSS ANATOMY OF THE THORACIC CAGE (shp90;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson presents the anatomy of the thoracic cage.
none;90 minutes;physicians' assistants

THE HUMAN DIGESTIVE SYSTEM (digestion;1975;1977)
Boggs, Stephen H
University of Illinois, Urbana, Illinois
The lesson teaches the major organs and structures of the human digestive system, the locations of each and the function each performs.
none;50 minutes;college/university students in biology or physiology

INTRO. TO THE HUMAN NERVOUS SYSTEM: SPINAL CORD (nervsyst;1976;unpublished)
Wadsworth, Gladys E; Kroll, Martin
School of Medicine, University of Maryland, Baltimore
This lesson is composed of two subunits: part one identifies the three subsystems into which the nervous system is classified, and part two describes the fundamental external and internal structures of the spinal cord as well as the meniges and their relationship to each other. The sources of the blood supply to the spinal cord are discussed briefly.
none;35 minutes;first year medical students

OBSTETRICAL ANATOMY PART I (mnurse3;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson is concerned with the culmination of pregnancy: labor, the series of processes by which the infant and accessory parts are expelled from the mother's body, and delivery, the actual expulsion of the infant.
none;none;nursing students

OBSTETRICAL ANATOMY PART II (mnurse4;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson continues the discussion begun in "Obstetrical Anatomy Part I" with information about the presentation, position and degree of descent, which is necessary to evaluate the progress of labor.
none;none;nursing students

REPRODUCTIVE ANATOMY REVIEW (pelvis;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Division, Parkland Col., Champaign, Ill.
This lesson offers a review drill on reproductive anatomy with particular application for Maternity Nursing. The review encompasses the soft parts of the pelvic region, both male and female. The drill requires a microfiche.
slide selector, microfiche;30 minutes;students of nursing

REVIEW OF ANATOMY OF FEMALE REPRODUCTIVE SYSTEM (mnurse2;1975;1978)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson is a brief review of the anatomy of the female reproductive organs. Other organs or structures which are involved in pregnancy either through close proximity or functional relationship are also included.
none;none;nursing students

X-RAY OF THE CHEST, PARTS II AND III (shp60;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas
This lesson teaches the student to become familiar with the xray appearance of the bones of the thoracic cage, the mediastinum and the lungs.
none;45-60 minutes;radiologists

Anatomy, Human--Examinations, questions, etc.

ANATOMICAL REFERENCE TERMINOLOGY (shp56;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson will teach the student to name the "standard position" of the body for proper anatomical reference, the correct anatomical reference terms based upon descriptive phrases displayed with appropriate drawings, and the three anatomical "planes of reference". A "matching drill" of twelve anatomical reference definitions is included.
none;20-30 minutes;physicians' assistants

ANATOMICAL TERMINOLOGY VI: ANATOMY VOCABULARY DRILL-QUIZ (anaterm6;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
This lesson features a number of rather basic terms in anatomy. As each term is presented, the student has several options: receive a definition or example of how it is used, receive a hint as to what it means, receive a question about the word, or skip to the next new word. A score is recorded on how many words the student correctly defined.
none;10 minutes;first year medical students

ANATOMY QUIZ: ABDOMINAL WALL AND VISCERA (anaquiz3;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
This lesson features six separate areas - each area presenting questions in a different format (e.g., multiple choice and sequencing). The content includes the inguinal canal, bile duct system, topography of the abdominal viscera, vasculature of abdominal wall and viscera, and muscles and nerves of the abdominal wall.
none;15 minutes;first year medical students

ANATOMY QUIZ: LOWER EXTREMITY (anaquiz4;1976;unpublished)
Kahn, Madelyn I; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson features five separate areas - each area presenting questions in a different format (e.g., fill in the blank and sequencing). The content includes the veins, arteries, nerves, and muscles of the lower extremity. Student's score on the quiz is presented and evaluated.

none;20 minutes;first year medical students

ANATOMY QUIZ: PELVIS AND PERINEUM (anaquiz2;1976;unpublished)
Kahn, Madelyn I; Gaburo, K; McCormick, R
School of Basic Medical Sciences, Univ. of Illinois

This lesson features four separate areas - each area presenting questions in a different format (e.g. fill in blank and sequencing). The content includes veins, arteries, nerves, compartments and muscles of the perineum; features of the male and female reproductive systems, and ligaments of the female reproductive system. Score is presented and evaluated.

none;15 minutes;first year medical students

ANATOMY QUIZ: THE HEAD (anaquiz1;1976;unpublished)
Kahn, Madelyn I; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson features six separate areas - each area presenting questions in a different format (e.g., multiple choice or sequencing). The content includes arteries and veins, nerves and plexuses, muscles and ligaments, bony markings, sinuses and eyeball muscles. Student's score on the quiz is presented and evaluated.

none;15 minutes;first year medical students

ANATOMY QUIZ: THE NECK (anaquiz6;1976;unpublished)
Gaburo, K; McCormick, R; Kahn, Madelyn I
School of Basic Medical Sciences, Univ. of Illinois

This lesson features five separate areas - each area presenting questions in a different format (e.g., multiple choice or matching). The content includes neck spaces, triangles, neural and blood supply, and ligaments and muscles. Student's score on the quiz is presented and evaluated.

none;15 minutes;first year medical students

ANATOMY QUIZ: THORACIC WALL, HEART AND MEDIASTINUM (anaquiz5;1974;unpublished)
McCormick, R; Kahn, Madelyn I; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois

This lesson features six separate areas - each area presenting questions in a different format (e.g., sequencing and matching). The content includes heart valves and blood supply through the heart, layers of the thoracic wall, muscles of thoracic and abdominal walls, innervations and blood supply of the thoracic wall, organ topography of mediastinum.

none;15 minutes;first year medical students

ANATOMY: PLANES, DIRECTIONS, AND MOVEMENTS (intvocl;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews basic terminology of planes, directions and motions in human anatomy.
none;15 minutes;first year medical students

BASIC BRAIN ANATOMY (curtiss4;1977;unpublished)
Dubrick, Anton J; Curtis, Brian A
Peoria School of Medicine of the Univ. of Illinois
Part I of this lesson discusses the medulla, pons and mid-brain, cerebellum and diencephalon. Part II presents the cortical lobes, cortical landmarks and primary motor and sensory cortices. The student is given an opportunity to learn the location of each part and its associated functions.
touch panel;20-30 minutes;first year medical students

BRACHIUM: CLINICAL APPLICATIONS AND DRILL (antebrl;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
In this quiz lesson, the student is asked to identify gross anatomical structures of the forearm. PLATO graphics are used as the source for questions. Bone fractures and a knife puncture are used in this practical anatomy approach.
none;15 minutes;first year medical students

BRACHIUM: STRUCTURE, IDENTIFICATION, AND DRILL (brachl;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
In this quiz lesson, the student is asked to identify gross anatomical structures of the arm. PLATO graphics are used as the source for questions. The major content area includes identification of certain parameters of muscle function (origin, insertion, innervation and action) associated with the brachium.
none;15 minutes;first year medical students

CRANIAL NERVE REVIEW AND DRILL (curtiss17;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine of the Univ. of Illinois
This lesson provides a review of cranial nerve functions via tables and drills.
none;15 minutes;students of occupational therapy

HUMAN SKELETAL SYSTEM: PART I - THE THORAX (skelsys2;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thorax. Surfaces, borders and markings of the sternum, costal cartilages, and typical and atypical ribs are illustrated and described. Boundaries of the thoracic inlet and outlet are defined. Directions for palpating subcutaneous parts of these bones are included. There is a post-test.

none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART III - THIGH AND LEG (skelsys3;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thigh and leg. Surfaces, borders and markings of the femur, patella, tibia and fiblua are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART V - SHOULDER GIRDLE (skelsys5;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the shoulder girdle. Surfaces, borders and markings of the clavical and scapula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART VI - THE ARM (skelsys6;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the arm and forearm. The surfaces, borders and markings of the humerus, radius and ulna are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PT.II - PELVIC GIRDLE (skelsys;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This lesson on osteology introduces the student to the bones of the pelvic girdle. Surfaces, borders and markings of the hipbone, sacrum and coccyx are illustrated and identified. The bony landmarks of the pelvic inlet and outlet are identified, as well as characteristics which aid in determining the sex of the pelvis. A post-test is included.

none;20 minutes;first year medical students

THE HUMAN SKELETAL SYSTEM: PT.IV - BONES OF THE FOOT (skelsys4;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This lesson presents the osteology of the bones of the foot. Surfaces and markings of the tarsals, metatarsals and phalanges are illustrated and described. Directions for palpating the structures of these bones which are subcutaneous and readily felt in the living body are included. A post-test evaluates the learning experience.
none;30 minutes;first year medical students

INTRODUCTION TO THE HUMAN NERVOUS SYSTEM: NERVE PLEXUSES (nervplex;1976;unpublished)
Wadsworth, Gladys E; Bennett, Charles
School of Medicine, Univ. of Maryland, Baltimore
This lesson describes the plexuses derived from ventral rami of spinal nerves. It develops schematically the major structural components of the brachial plexus and relates the effect severance of these components has upon the muscles they innervate.
none;15 minutes;first year medical student

INTRO. TO HUMAN NERVOUS SYSTEM: SPINAL NERVES (nervsyst2;1976;unpublished)
Wadsworth, Gladys E; Kroll, Martin
School of Medicine, University of Maryland, Baltimore
This lesson enumerates the segmental nerves and illustrates the components of a typical spinal nerve. Characteristics of the ventral rami of thoracic nerves are presented graphically. Shown schematically is the structure of motor and sensory neurons and the visceral motor pathway of the sympathetic division of the autonomic nervous system.
none;15 minutes;first year medical students

INTRO. TO THE HUMAN NERVOUS SYSTEM: DERMATOMES (derma;1976;unpublished)
Wadsworth, Gladys E; McDiarmid, Melissa A
School of Medicine, Univ. of Maryland, Baltimore
This lesson defines the term "dermatome" and presents schematically the effect of overlapping of contiguous segments. It illustrates the dermatomal pattern of the upper limb and compares the sensory innervation of a spinal nerve with that of a peripheral nerve.
none;15 minutes;first year medical students

A QUIZ ON THE SCAPULA (scapula;1977;unpublished)
Miller, David B; McCraw, Gordon W
School of Basic Medical Sciences, Univ. of Illinois
This quiz lesson tests the student's knowledge of all gross anatomical structures impinging upon the scapula, including origins, insertions, innervations, and actions of the muscles, bony landmarks and their functions, and the major vascular channels.
none;15 minutes;first year medical students

SELF-ASSESS. QUIZ ON MED. & ANAT. ROOTS, PREFIXES, SUFFIXES (anaterm0;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
This is the first in a series of six lessons dealing with anatomical-medical terminology. The lesson presents ten complex terms to the student for analysis-deriving the meaning. The results of student performance are diagnosed, leading the student to specific lessons in the anaterm series that will eliminate his/her weakness.
none;10 minutes;first year medical students

SPINAL CORD ANATOMY, A CLINICAL APPROACH (curtiss5;1977;unpublished)
Dubrick, Anton J; Curtis, Brian A
Peoria School of Medicine of the Univ. of Illinois
This lesson covers basic cord anatomy, spinal nerve roots, discs, reflexes and major spinal tracts. A quiz and clinically oriented practice drills are included.
touch panel;15 minutes;first year medical students

UPPER MEMBER ANATOMY QUIZ (umq1;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
This lesson offers the student a device to test or reinforce recall of terminology of the upper member. The contents include bony markings, vasculatures, muscles, ligaments, and innervations associated with the upper member.
microfiche;15 minutes;first year medical students

UPPER MEMBER CLINICAL APPLICATION (umclin1;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
Three problems with a clinical flavor illustrate for the student the efficacy of anatomical knowledge in medical practice: 1) consequences of severing the deep radial nerve, 2) consequences of injury to radial nerve by midshaft fracture of the humerus, and 3) consequences of brachial plexus injury by shoulder hyperdepression.
none;10 minutes;first year medical students

Anatomy, Surgical and topographical

INTRODUCTION TO RESPIRATION AND VENTILATION (shp65;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson defines the processes of respiration and ventilation, illustrates the principles that explain how ventilation occurs, provides an introduction to the anatomical components of the respiratory system, and introduces the topographical anatomy of the lungs.
none;60-90 minutes;physicians' assistants

Anatomy--Terminology

ANATOMICAL REFERENCE TERMINOLOGY (shp56;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson will teach the student to name the "standard position" of the body for proper anatomical reference, the correct anatomical reference terms based upon descriptive phrases displayed with appropriate drawings, and the three anatomical "planes of reference". A "matching drill" of twelve anatomical reference definitions is included.
none;20-30 minutes;physicians' assistants

ANATOMICAL TERMINOLOGY III: A COMPETITIVE DRILL ON ROOT WORDS (anaterm3; 1975;unpublished)
McCormick, R; Gaburo, K; Siegel, Martin A; et al.
School of Basic Medical Sciences, Univ. of Illinois
This lesson features a learning reinforcement drill (feedback paradigm) on the more commonly used anatomical/medical roots. At the user's option his/her score is displayed with the twenty top users at the end of the lesson.
none;10 minutes;medical students

ANATOMICAL TERMINOLOGY II: DICT. AND DRILLS FOR ROOTS, ETC. (anaterm2;1975;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
Over 300 of the commonly used anatomical/medical morphemes (roots, prefixes, and suffixes) are presented in this dictionary and drill type lesson. With each morpheme is its meaning, its Greek and Latin derivation and a sample word illustrating its use. Drills on ten morphemes at a time are available as an aid to learning reinforcement.
touch panel;open-ended;medical students

ANATOMICAL TERMINOLOGY IV: DRILL ON PREFIXES AND SUFFIXES (anaterm4; 1976;unpublished)
McCormick, R; Gaburo, K; Siegel, Martin A; et al.
School of Basic Medical Sciences, Univ. of Illinois
This lesson features a learning reinforcement drill (feedback paradigm) on the more commonly used anatomical/medical prefixes and suffixes. At the user's option, his/her score is displayed with the top twenty users at the end of the lesson.
none;10 minutes;first year medical students

ANATOMICAL TERMINOLOGY I: HOW TO ANALYZE ANATOMICAL TERMS (anaterm1; 1975;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
This lesson is designed to help the user learn how to analyze anatomical/medical terms - breaking each term apart into individual morphemes (prefixes, roots and suffixes). The user is given the opportunity to practice what he/she has learned.
none;10 minutes;first year medical students

ANATOMICAL TERMINOLOGY VI: ANATOMY VOCABULARY DRILL-QUIZ
(anaterm6;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

This lesson features a number of rather basic terms in anatomy. As each term is presented, the student has several options: receive a definition or example of how it is used, receive a hint as to what it means, receive a question about the word, or skip to the next new word. A score is recorded on how many words the student correctly defined.

none;10 minutes;first year medical students

ANATOMICAL TERMINOLOGY V: QUIZ ON COMMON ROOT MEANINGS ETC.
(anaterm5;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson features four unique quizzes (race-the-clock matching, word synthesis, synonyms, and fill-in-the-blank) designed to test the user's knowledge of meanings of individual anatomical/medical roots, prefixes, and suffixes. The user's score is compared with the scores of other users and related lessons are suggested for further study.

none;10 minutes;medical students

ANATOMY: PLANES, DIRECTIONS, AND MOVEMENTS (intvocl;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

This lesson reviews basic terminology of planes, directions and motions in human anatomy.

none;15 minutes;first year medical students

THE HUMAN SKELETAL SYSTEM: PT.IV - BONES OF THE FOOT (skelsys4;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This lesson presents the osteology of the bones of the foot. Surfaces and markings of the tarsals, metatarsals and phalanges are illustrated and described. Directions for palpating the structures of these bones which are subcutaneous and readily felt in the living body are included. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

SELF-ASSESS. QUIZ ON MED. & ANAT. ROOTS, PREFIXES, SUFFIXES
(anaterm0;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This is the first in a series of six lessons dealing with anatomical-medical terminology. The lesson presents ten complex terms to the student for analysis-deriving the meaning. The results of student performance are diagnosed, leading the student to specific lessons in the anaterm series that will eliminate his/her weakness.

none;10 minutes;first year medical students

UPPER MEMBER ANATOMY QUIZ (umq1;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
This lesson offers the student a device to test or reinforce recall of terminology of the upper member. The contents include bony markings, vasculatures, muscles, ligaments, and innervations associated with the upper member.
microfiche;15 minutes;first year medical students

Anemia

DRUGS: HEMATINIC AGENTS (kumc47;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson discusses the different anemias. Therapy precribed is based on the etiology of the type of anemia.
none;10 minutes;first year medical students

Anesthesia

CNS PHARMACOLOGY: ANESTHESIA CASE STUDY (kumc38;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents questions based upon a case history regarding general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

Anesthetics

CNS PHARMACOLOGY: ANESTHESIA QUIZ (kumc30;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson is a quiz on basic principles of general anesthesia and clinically pertinent gaseous anesthetic agents.
none;15 minutes;first year medical students

CNS PHARMACOLOGY: GENERAL ANESTHESIA (kumc29;1975;unpublished)
Kansas University Medical Center; Nelson, S; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson covers the general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

DRUGS: LOCAL ANESTHETIC AGENTS (kumc50;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses local anesthetics, their uses and problems.
none;10 minutes;first year medical students

DRUGS: LOCAL ANESTHETIC REVIEW (kumc48;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides a quiz and review of material dealing with local anesthetics.
none;15 minutes;first year medical students

Angiosperms

PLANT LIFE CYCLES (cycles;1974;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson constructs a diagram of a generalized plant life cycle, discusses the relationship between gametophyte and sporophyte generations and illustrates how this relationship differs throughout the plant kingdom, with special emphasis on its evolutionary significance.
microfiche;90 minutes;college/university students

Angle

INTRODUCTION TO THE GNOMONIC PROJECTION (gnompr;1977;unpublished)
Curtin, David Y
Chemistry Dept., U. of Illinois, Urbana IL
The lesson, fifth in the Crystallography series, introduces the gnomonic projection as a method of visualizing the three-dimensional arrangement of vectors and planes.
none;none;college and university undergraduate and graduate students

USE OF THE OPTICAL GONIOMETER (goniom;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
The sixth crystallography lesson instructs in the measurement of the angles between the faces of a crystal with a two-circle goniometer, presenting the results as a gnonomic projection. A working simulation of a goniometer allows measurement of the angles between faces of a simulated crystal, showing the collected data as a gnomonic projection.
none;none;college and university undergraduate and graduate students

Animal genetics

POPULATION GENETICS: HARDY-WEINBERG PRINCIPLE (popgen;1974;1978)
Grossman, Michael; Walter, David
Dept. of Dairy Science, Univ. of Ill., Urbana, IL
The student is shown how to deduce the effects of mutation, migration, selection and drift on gene frequency by observing various simulations. Familiarity with the Hardy-Weinberg principle and its assumptions is assumed.
none;10 minutes per simulation;college and university students of genetics

POPULATION GENETICS: QUANTITATIVE GENETICS (quantgen;1974;1978)
Grossman, Michael; Walter, David
Dept. of Dairy Science, Univ. of Ill., Urbana, IL
The lesson teaches the student how to deduce the effects of various selection methods and intensities on representative traits from agricultural production by simulating a quantitative genetics laboratory in which the program generates graphs of improvement vs. generations depending on the parameters chosen by the student.
none;open-ended; 10 minutes per simulation;college/university students

Animals, Habits and behavior of

A SELF-CONTAINED LAB. WITH A "SIMPLE" BEHAVIOR (kinesis;1972;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses a stochastic "choice" algorithm and animation to demonstrate orientation behavior in a "bug" exposed to variable stimuli. Students determine the quality (+ or -) and strength of the stimulus, and record "end points" of bug travel. A statistical (chi-square) evaluation of the hypothesis of random distribution is then made.
optional manual;45 minutes;university/college biology students

SOCIAL BEHAVIOR SIMULATED FIELD OBSERVATIONS (birds;1974;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses animation and a stochastic model of bird aggression to allow students to investigate the "personal space" phenomenon typical of many animal groups.
none;60 minutes;college/university zoology students

Animations

Editor programs (PLATO)

ANIMEDITOR VERSION 2.0 (animatic;1976;1977)
Frye, G. David
University of Illinois
The ANIMeditor allows one to write animated notes which are not subject to the idiosyncracies of system editors.

The program is an "MFL Tag Team Presentation."
none;open-ended;any PLATO author

TECHNIQUES OF IN-LINE ANIMATION (animation;1976;1978)
Parrello, Bruce
University of Illinois
This lesson is an introduction to in-line (as opposed to hard-coded) animation.
none;open-ended;computer programmers

Annuities--Tables

COMPOUND INTEREST (jcm;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the fundamentals of compound interest, the methods of computing present and future value, and the use of future value, present value, and present value of annuity tables.
none;open-ended;introductory and managerial accounting students

Anoxemia

CELL INJURY: INTRO. TO CELL INJURY & CELL DEATH (cellinjury;1976;unpublished)
Mergner, Wolfgang; Bennett, Charles
School of Medicine, Univ. of Maryland, Baltimore
This lesson defines cell injury, distinguishes acute chronic cell injury, defines reversible and irreversible cell injury, and differentiates between the two by defining the "point of no return." The lesson also describes the three factors of ischemic cell injury: anoxia, lack of perfusion, and lack of substrate.
none;15 minutes;first year medical students

Antibiotics

ANTIMICROBIAL CHEMOTHERAPY (shp66;1975;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson discusses the general concepts of antimicrobial chemotherapy and the currently available compounds that can be effective in the treatment of infectious diseases.
none;45-60 minutes;physicians' assistants

CHEMOTHERAPEUTICS CASE SERIES: ANTIBIOTICS (kumc16;1975;unpublished)
Kansas University Medical Center; Hody, George; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents several disease cases and asks the student to select appropriate treatment from the choices offered.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT II (kumc40;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents several patients to the student, describes the illnesses, and provides discussion of the therapies and medications that have been prescribed by "Dr. PLATO".
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT III (kumc24;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry
University of Kansas / University of Illinois
This lesson presents patients and symptoms, and asks the student to practice making diagnoses and prescribing treatment.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT IV (kumc25;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
In this lesson, several disease cases dealing with antibiotic treatment are discussed.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT V (kumc26;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents several disease cases and discusses the positive and negative aspects of the antibiotics chosen for treatment.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: REVIEW QUESTIONS (kumc27;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
Review questions based on the material presented in the "Chemotherapeutics" lessons are presented in this lesson.
none;10 minutes;first year medical students

Anticonvulsants

CNS PHARMACOLOGY: ANTICONVULSANT QUIZ (kumc20;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Woods, James; et al.
University of Kansas / University of Illinois
This lesson is a quiz on clinically pertinent anticonvulsant agents.
none;15 minutes;first year medical students

Antidepressants

CNS PHARMACOLOGY: ANTIDEPRESSANT QUIZ (kumc21;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson is a quiz over general principles of depression and clinically pertinent antidepressant agents.
none;10 minutes;first year medical students

Antidiuretic hormone

see Vasopressin

Antigens and antibodies

BLOOD GROUP SYSTEMS OTHER THAN ABO AND Rh (hemcarle1;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson provides clinically significant information on some of the more important blood group systems other than the ABO and Rh systems.
none;none;laboratory technology students, medical students

CYTOTOXIC HYPERSENSITIVITY (mdimmum;1975;unpublished)
Kessel, Ross; Wagner, Kenneth; Cohen, Barry; et al.
University of Maryland and University of Illinois
This lesson deals with cytotoxic (Type II) hypersensitivity. It covers the mediators and the mechanisms of cytotoxic hypersensitivity as well as the laboratory investigation, management and pathology of some cytotoxic disease states.
none;30 minutes;first year medical students

MOUNTING IMMUNE RESPONSES (immuresp;1978;unpublished)
Kessel, Ross; Rivera, David
University of Maryland and University of Illinois
This lesson covers the basics of the immune response, including the mediators (ab and lymphocytes), antibody synthesis, cell mediated immunity and immunotolerance.
none;none;first year medical students

Antihistamines

HISTAMINE AND ANTIHISTAMINES (shp111;1975;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson presents information about the definition, formation, release, pharmacology and physiology of histamines, and the mechanism of action, pharmacology, therapeutic uses and side effects of antihistamines. Decongestants are discussed in relation to allergic rhinitis.
none;2 hours;physicians' assistants

Antimalarials

ANTIMALARIAL CHEMOTHERAPY (plasmodia;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for malarial infection. It includes the drug spectra, modes of action, indications and contraindications. Questions are incorporated for interaction and self-evaluation.
optional touch panel;none;first year medical students

Antiphlogistics

CNS PHARM.: ASPIRIN-TYPE ANALGESICS & ANTI-INFLAM. AGENTS (kumc28;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the analgesic and anti-inflammatory effects of salicylates and other aspirin-type agents.
none;20 minutes;first year medical students

DRUGS: ANTI-INFLAMMATORY QUIZ (kumc41;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides a quiz over the anti-inflammatory drug materials presented in the PLATO pharmacology lessons.
none;10 minutes;first year medical students

DRUGS: ANTI-INFLAMMATORY AGENTS - CONSULT (kumc35;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
In this lesson the student serves as a consultant and is asked to answer certain questions concerning the treatment of a patient.
none;15 minutes;first year medical students

Anti-inflammatory agents
see Antiphlogistics

Anxiety

ANXIOUS PATIENT: SIMULATED CARE PROGRAM (nursing15;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
This lesson is a patient care problem about an anxious patient. The goal of the lesson is to apply principles of intervention for an anxious patient. The format of the problem is an opening scene followed by a number of sections where you are required to make a decision about intervention, after which you will be informed of the consequences.
none;none;nursing students

NEUROSIS AND THE TREATMENT OF NEUROSIS (nursing8;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
The goal of this lesson is to understand neurosis and the methods of treating it. The method used is the presentation of materials followed by one or more questions on the material.
none;30-45 minutes;nursing students

Aortic aneurysms

MYSTERIOUS SPINAL CD. CASE IV: ANTER. SPINAL ART. OCCLUSION
(curtiss15;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides review of the expected clinical findings of the anterior spinal artery occlusion syndrome, correlated with expected neuroanatomical defects.
none;5-10 minutes;students of occupational therapy, medical students

Aortic coarcation

CONGENITAL DEFECTS OF THE HEART AND GREAT VESSELS (pedcard;1977;unpublished)
Green, Michael; Sliwa, W. Gerard
School of Basic Medical Science, Univ. of Illinois
This lesson presents basic physiology and key clinical signs of major congenital defects of the heart and great vessels.
none;none;first year medical students

APL (Computer programming language)

AN INTRODUCTORY LESSON TO APL (aplintro;1975;1978)
Simkin, Merrick; Padua, David; Groupe, Alan; et al.
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
This is the first in a series of lessons teaching the APL programming language. The first lesson presents the basics of the language. There is a HELP sequence for information about terms used in the language, a readily accessible diagram of the APL keyset configuration and workspace in which students can try writing programs.
none;none;college/junior college students

SCALAR ARITHMETIC IN APL (aplscalar;1975;1978)
Simkin, Merrick; Padua, David; Groupe, Alan; et al.
Dept. of Computer Science, ACSES Project, U. of I
This is the second in a series of three lessons teaching the APL Programming Language. The scalar mathematical operators are examined in this lesson. Scalar operators are those operating on the value of only one number as opposed to an array of values.
none;none;college/university students

VECTOR ARITHMETIC IN APL (aplvector;1975;1978)
Padua, David; Simkin, Merrick; Groupe, Alan; et al.
Dept. of Computer Science, ACSES Project, U. of I
This is the third in a series of three lessons teaching the APL Programming Language. The vector mathematical operators are examined in this lesson. Vector operators are those operating on arrays of values as opposed to only one number.
none;none;college/university students

Approximation theory

CLOSEUP (closeup;1976;1977)
Schreiner, Axel T
Mathematics Department, University of Illinois

This is a program for the simulation of various approximation methods and provides a general plotting capability for functions and straight lines.

none;open-ended;college/university students

Arenes

ELECTROPHILIC AROMATIC SUBSTITUTION (arene;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This lesson deals with the introduction of substituents on a benzene ring. The mechanism of electrophilic substitution and its directive effects are presented.

none;58 minutes;college/university students

Arithmetic

Addition

ADDING AND SUBTRACTING ON THE NUMBER LINE (signum;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson introduces the number line, the negative numbers, and teaches order on the number line. It also teaches a number line model of adding and subtracting signed numbers and includes practice problems.

none;45 minutes;basic mathematics students

ADDING DOTS (zdotdot;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Cohen, Paul
U of I NSF Elem. Math. Group, Urbana, Illinois

The lesson is designed to teach the model of addition as putting together sets of objects. It gives practice in expressing addition concepts in mathematical notation. The student learns to draw a picture of an addition number sentence using dots as well as to write an addition number sentence describing the picture of dots.

touch panel;10 minutes;intermediate elementary level

ADDING LENGTHS (zlengths;1976;unpublished)
Weaver, Charles S; Cohen, Paul; Bonetti, William
U of I NSF Elem. Math. Group, Urbana, Illinois

The lesson introduces the student to a model of addition as a combining of lengths. The student is taught how to write an addition number sentence given a picture of sticks laid end to end.

none;10 minutes;intermediate level elementary students

ADDITION CHECK-UP (zaddchk;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Wilson, James H
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson measures the student's ability to work five 2-digit and 3-digit addition problems that require carrying. The material is in one segment which repeats periodically until the student passes.
none;one 10 minute segment repeated until mastered;elementary students

ADDITION OF SIGNED NUMBERS (signadd;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the number line and negative numbers and teaches order on the number line. It also presents a number line model of adding signed numbers and practice problems of the same.
none;35 minutes;basic mathematics students

ADDITION, SUBTRACTION AND MULTIPLICATION OF SIGNED NUMBERS (bank;1974;1978)
Cohen, Donald; Glynn, Jerry; Weaver, Tamar A; et al.
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches arithmetic of signed numbers and provides practice in adding and multiplying of signed numbers.
none;60 minutes;basic mathematics students

ADDITION WITH STICKS AND PLACE VALUE WITH STICKS (zbundle;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson is designed to improve the understanding of place value by using a physical model of sticks and bundles of sticks to describe two digit numbers. The student is shown how to do addition problems quickly by breaking up the numbers using place value.
none;5 ten minute segments;intermediate level elementary students

CARRYING IN ADDITION (zcarry;1976;unpublished)
Steinberg, Esther R; Leiser, David
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson is written to explain the addition algorithm and carrying in terms of sticks and bundles of sticks. At the completion of the lesson the student should be able to do the addition algorithm wih two digit numbers and to understand "carrying" in terms of sticks and bundles of sticks.
none;three ten minute segments;intermediate level elementary students

COLUMN ADDITION (zcolumn;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Steinberg, Esther R; et al.
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson introduces the technique of column addition by grouping numbers in order to add them. It provides practice in adding columns of numbers and in finding errors in column additions.
touch panel;open-ended;intermediate level elementary students

EXERCISES -- ADDING AND SUBTRACTING (signprac;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides drill practice in adding and subtracting signed numbers and a posttest for these skills.
none;30 minutes;basic mathematics students

HAPPY ADDITION (wmg09;1977;1977)
Vretblad, Orjon; Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This is the final arithmetic exercise in the series of elementary lessons, "wmg01" - "wmg09". This lesson presents problems in addition assisted by an animated happy face.
none;no data;first grade school children and up

NUMBER ACCUMULATOR (accum;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This is a lesson which allows the student to practice adding and subtracting numbers to equal the number given by PLATO.
touch panel;open-ended;elementary mathematics students

PROBLEM MACHINE (zpmachine;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson helps the student understand the addition and subtraction algorithms by showing him incorrect problems and having him adjust one of the numbers in the problem to make it correct.
none;open-ended;intermediate level elementary students

SKIP COUNTING (wmg05;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This program is an exercise in counting by 5's, or other numbers. Three levels of difficulty are offered the student.
none;none;elementary school children

SPACE PORT (port;1975;1978)
Dugdale, Sharon
U of I NSF Elem. Math. Group, CERL
The lesson provides experience with easy function rules.
none;open-ended;primary grade students

WHOLE NUMBER OPERATIONS PRACTICE (ops;1977;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is intended for review practice of whole number operations. It is not a teaching lesson and does not offer help. It is intended to give the student quick practice in skills they have already learned in addition, subtraction, multiplication and division.
none;2-5 minutes/session;basic math. students

Calculators

BLACKBOARD (zbboard;1976;unpublished)
Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides a setting in which students can experiment with arithmetic expressions without having to perform computations. It provides practice in constructing arithmetic expressions with specified values.
touch panel;open-ended;upper level elementary students

CALC-O-MATIC (calcomatic;1976;1976)
Brown, Douglas W
University of Illinois at Urbana-Champaign
This is a utility lesson for the evaluation of complex number expressions. Explanations are given for the use of the calculator for expressions involving functions, factorials, combinations and permutations, substitution, graphing, series evaluations and limit approximations.
none;open-ended;general

THE MATRIX CALCULATOR (calc21;1973;1977)
Parrello, Bruce
University of Illinois
This lesson consists primarily of a calculator designed for performing routine operations on matrices.
none;open-ended;freshman/sophomore college

REVERSE POLISH NOTATION (rpcalc;1976;1978)
Nudelman, Mark
Department of Computer Science, University of Illinois
This lesson explains reverse notation and presents a simulation of a reverse polish notation calculator.
this lesson requires a touch panel;open-ended;none

TOUCH-O-MATIC CALCULATOR (touchcalc;1976;1977)
Gilfillan, James W
Comp.-based Educ. Res. Lab., University of Illinois

The program simulates a calculator operated by means of touching points on the screen. It was written to demonstrate the calculating power of the PLATO system and the use of the touch panel. Error messages for incorrect expressions are provided and the capabilities include calculations of time, date, day, functions, exponentials, absolute numbers, etc.

touch panel;open-ended;general

Coordinate systems

PARK YOUR CAR (stories;1972;1977)
Steinberg, Esther R
Computer-based Educ. Res. Lab., Univ. of Illinois

The lesson is about coordinates. It is intended to familiarize the student with basic ideas of the coordinate system. It uses a familiar setting, a parking lot for cars. Axes are represented by streets and the locations on the system are parking spaces, which are identified in terms of distance and direction from the streets.

none;30-45 minutes;elementary school children, fourth grade level

Counting

COUNTDOWN (zcountdown;1976;unpublished)
Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois

The lesson introduces the idea of subtracting by counting backwards by tens and units and provides practice using that technique.

none;10 minute session repeated until mastered;elementary students

HOP GAME (zhop;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois

The lesson is in game format. It provides practice in skip counting. The student starts at a given number between -100 and 1000, and counts by intervals of 1 to 12, forwards and backwards.

none;10 minutes, repeatable;elem. students

MENTAL COUNTDOWN (zcountdow2;1976;unpublished)
Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois

The lesson provides explicit instruction and practice in mental subtraction by counting backwards. It is a sequel to lesson "zcountdown".

none;three sessions, repeatable;elementary students

NUMBER LINE: WHOLE NUMBERS (nlintroa;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is intended to familiarize the student with whole numbers on a number line.
none;open-ended;students of basic mathematics

SKIP COUNTING (newcount;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math Group, Urbana, Ill.
This lesson gives the student practice in "skip counting". The student is told to count forward or backward by a certain number; PLATO begins the counting and the student takes over. PLATO will help if the student chooses.
none;open-ended;elementary mathematics students

Division

CHAPTER CHECKUPS (zmodcheck;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson offers checkup problems for multiplication meanings, techniques and subtraction ("countdown" and "facts" methods), and the multiplication algorithm as well as division concepts.
none;open-ended;intermediate level elementary students

DIVIDE AND CONQUER (zdivtech;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides more practice in using the techniques of division to solve problems selected by PLATO.
none;One short segment and unlimited repeats;elementary students

DIVISION MEANS...... (zdivmeans;1976;unpublished)
Felty, Michael
U of I NSF Whole Number Elem. Math. Group
The lesson introduces the different meanings of division and bridges the gap between their representation in pictures, words and symbols.
none;2-5 short segments plus practice;elementary students

DIVISION USING SPECIAL NUMBERS (zdivlist; 1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Campanini, Sue
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides understanding of the division algorithm as a way of working division problems so that one only needs to multiply the divisor by one-digit numbers. The objective is to make the student able to use a table of one-digit multiples of the divisor to work division problems efficiently.
none;one 10 minute segment, unlimited repeats;elementary students

GIMME (DIVISION AS SHARING) (zgimme;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I NSF Whole Number Elem. Math. Group
The lesson introduces a modified division algorithm (not based on place value) in the context of a physical model of sharing objects. The student is taught that the concept of division is "sharing equally among groups".
none;two 10 minute segments, unlimited repeats;elementary students

GUESSING DIVISION (ztrynum;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Campanini, Sue
U of I NSF Whole Numner Elem. Math. Group
The lesson teaches the student the technique of working division problems by finding the largest multiple of the divisor that fits into the dividend. The student is to guess quotients and multiplies to see if they fit.
none;two 10 minute segments, unlimited repeats;elementary students

HOME SWEET TOADSTOOL (ztoad; 1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Wilson, James H
U of I NSF Whole Number Elem. Math. Group
The lesson introduces repeated subtraction on the numberline in the context of a physical model to solve a division problem.
none;5 ten minute segments, unlimited repeats;elementary students

INTRODUCTION TO LONG DIVISION, PART I (zdiv1;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I NSF Whole Numbers Elem. Math. Group
The lesson introduces the long division algorithm in terms of the model of sharing objects equally. The student is taught to use the standard long division algorithm when it is treated in terms of sharing concrete objects in different size containers.
none;three segments with repeats possible; elementary students

INTRODUCTION TO LONG DIVISION, PART II (zdiv2;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I NSF Whole Numbers Elem. Math. Group
The lesson teaches the students the connection between the standard long division algorithm and the model of it discussed in the previous lesson. It also teaches the students how to work problems using the standard algorithm.
none;three segments with repeats possible; elementary students

NUMBERLINE DIVISION (zdline;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Wilson, James H
U of I NSF Whole Number Elem. Math. Group
The lesson extends the "toad" model to using the numberline to solve division problems.
none;open-ended;upper level elementary students

REPEATED SUBTRACTION (zworms;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Whole Number Elem. Math. Group
The lesson attempts to introduce a modified division algorithm (not based on place value) in the context of a physical model of grouping objects.
none;two 10 minute segments, unlimited repeats;elementary students

STEP-BY-STEP DIVISION (zdivalg;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson
U of I NSF Whole Number Elem. Math. Group
The lesson provides practice doing division using the division algorithm.
none;unlimited repeats;upper level elementary students

WAYS TO DIVIDE--PRACTICE (zdivways;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Felty, Michael
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides the student practice with the techniques of division. It emphasizes that there are many different ways to solve a division problem. The student is allowed to choose the technique(s) he wishes to use for the solution of the problems.
none;one 10 minute segment, unlimited repeats;elementary students

WHOLE NUMBER OPERATIONS PRACTICE (ops;1977;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is intended for review practice of whole number operations. It is not a teaching lesson and does not offer help. It is intended to give the student quick practice in skills they have already learned in addition, subtraction, multiplication and division.
none;2-5 minutes/session;basic math. students

Exponents

EXPERIMENTING WITH EXPONENTS (exponents;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson introduces the function of exponents and provides practice for the student.
none;15-20 minutes;elementary mathematics students

Finite Differences

FINITE DIFFERENCES (finitedif;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student is asked to look at a table of numbers in order from smallest to largest and write the rule illustrated by the table.
none;15 minutes;elementary mathematics students

Arithmetic
Fractions

ADDITION AND SUBTRACTING WITH SIMPLIFYING AND BORROWING (pad2;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience adding and subtracting fractions and mixed numbers, simplifying answers and "borrowing" when necessary. A checkup on the material in this lesson is included.
none;lesson: 20-30 minutes, checkup: 5-10 minutes;basic math. students

ADDITION AND SUBTRACTION DRILL: LIKE AND UNLIKE DENOM. (tryad;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives practice in adding and subtracting fractions and mixed numbers with like and unlike denominators. The lesson is intended for students who have a basic understanding, but who need practice.
none;part 1: 30-60 minutes, part2: 1-1/2 hours;students of basic mathematics

ADDITION AND SUBTRACTION OF MIXED NUMBERS WITH LIKE DENOM. (pad1;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the subject of addition and subtraction of fractions and mixed numbers with like denominators.
touch panel;20-30 minutes;students of basic mathematics

ADDITION AND SUBTRACTION PRACTICE WITH EQUIVALENCE SETS (slad2;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience adding and subtracting fractions and mixed numbers, using a systematic method to find a common denominator.
touch panel;10-20 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM, PART 3: PRACTICE (hs3p4;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives the student experience using the problem-solving approach to addition and subtraction of fractions with unlike denominators.
none;15-30 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: PART 1 (hs1;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the addition of fractions and mixed numbers with unlike denominators. It also introduces an approach to problem-solving.
none;5-10 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: PART 2 (hs2;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math Group, CERL
The lesson gives the student a more detailed look at the problem-solving approach to addition of fractions with unlike denominators.
none;5-10 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: PART 3 (hs3;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson shows addition of coins as a familiar process which is similar to addition of fractions with unlike denominators. It reinforces the problem-solving approach to addition of fractions with unlike denominators.
none;5-10 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: PART 4 (hs3p4;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson reviews the problem-solving strategy for addition and subtraction of fractions with unlike denominators. This approach is applied to problems in which neither of the given denominators can be used for the common denominators (i.e. neither denominator divides the other evenly).
none;5-10 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: PART 4B (hs4p;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives practice in adding and subtracting fractions with unlike denominators. The lesson suggests a common denominator.
none;15-30 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: REVIEW (hsrev; 1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson summarizes and reviews the strategy for adding and subtracting fractions with unlike denominators.
none;10-20 minutes;students of basic mathematics

ADDITION PRACTICE, SIMPLIFYING ANSWERS (pad1;1975;1975)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience adding fractions and mixed numbers with like denominators, simplifying answers when necessary.
none;20-30 minutes;students of basic mathematics

ADDITION WITH EQUIVALENCE SETS (slad;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson suggests a method for finding a common denominator.
touch panel;10-15 minutes;students of basic mathematics

BOXES: EQUIVALENT FRACTIONS (receqa;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces a method for constructing fractions equivalent to a given fraction.
none;open-ended;students of basic mathematics

BOXES: EQUIVALENT FRACTIONS PRACTICE (receqb;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson offers practice in naming equivalent fractions with a familiar model available for help. The file contains not only the lesson but a checkup sequence.
touch panel;open-ended lesson, checkup: 3-5 minutes; basic math students

BOXES: HOW MUCH IS PAINTED? (recask;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson helps the student develop a strategy for figuring out what fraction of a box is painted. This skill is useful for addition of fractions using painted areas of a box.
touch panel;open-ended;students of basic mathematics

BOXES: NAME EQUIVALENT FRACTIONS (recnams;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson offers practice naming equivalent fractions with visual feedback comparing all of the named fractions.
touch panel;open-ended;students of basic mathematics

CHECKUP: ADDITION AND SUBTRACTION WITH UNLIKE DENOMINATORS (strad;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is a short checkup covering addition and subtraction of mixed numbers with unlike denominators. The student is able to list equivalence sets for the fractions involved in each problem if he or she chooses.
touch panel;5-10 minutes;students of basic mathematics

CHECKUP: CUT AND PAINT (recchk;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is a short checkup reviewing the material covered in the lesson, "Cut and Paint".
touch panel;5-10 minutes;students of basic mathematics

CHECKUP: MIXED NUMBERS WITH PIZZA (pmix;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I Fractions Elem. Math. Group, CERL
This lesson is a short checkup reviewing the material covered in lesson, "Pizza: Mixed Numbers Introduction".
touch panel;3-5 minutes;students in basic mathematics

CHECKUP: PIZZA FRACTIONS (pchk;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is a short checkup reviewing the material in lesson "Pizza: Fractions".
touch panel;5-10 minutes;students of basic mathematics

CUT AND PAINT (rec;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson lets the student construct fractions of a region by "painting" parts of rectangular boxes. It also involves numerators greater than 1.
touch panel;open-ended;students of basic mathematics

DARTS (darts;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Elem. Math. Group, CERL
The lesson is one in the group of Fractions Curriculum lessons which teaches "mixed numbers and fractions ≥ 1". It gives the student experience in locating fractions and mixed numbers on the number line. The lesson also includes a checkup to determine whether the student is ready for further number line work.
none;lesson: open-ended, checkup: 3-5 minutes;basic math. students

DECIMAL DARTS, PARTS 1 AND 2 (ddarts;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Elem. Math. Group, CERL
Two lessons on decimal fractions are included here as well as a checkup reviewing the material covered in Part 1. The first lesson introduces decimal names for tenths and hundredths; the second, decimal names for thousandths. Both lessons offer practice using the names to locate points on the number line.
none;lessons: open-ended; checkup: 3-5 minutes;basic math. students

DECIMAL NAMES FOR FRACTIONS (con;1975;1977)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Elem. Math. Group, CERL
The lesson offers the student practice writing decimal names for tenths, hundredths and thousandths.
none;20-30 minutes;students of basic mathematics

DECIMAL PINBALL (pind;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice converting common fractions and mixed numbers to decimal numbers. There is a time limit on each problem presented to the student. The lesson shows a list of record scores.
none;open-ended;students of basic mathematics

EQUAL FRACTIONS (frdrill;1976;1978)
Bailey, Keith
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides practice in writing equal fractions.
none;60 minutes;basic mathematics students

EQUIVALENCE EXPERIENCE (stermsx;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson encourages the student to think about the reason for finding the simplest terms name for a fraction by dividing out the common factors of the numerator and denominator. It also gives the student a chance to experiment with factors and divisibility related to equivalent fractions using PLATO to do the computations.
touch panel;open-ended;students of basic mathematics

EQUIVALENT FRACTIONS GENERALIZED (egen;1975;1977)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson presents a systematic method for finding fractions equivalent to a given fraction. It also gives practice in naming an equivalence set in order, starting with simplest terms. The latter skill is useful for systematically finding a common denominator for addition and subtraction of fractions. The file contains the lesson and a checkup.
none;lesson: open-ended, checkup: 5-10 minutes; basic math students

EXERCISES -- ARITHMETIC OPERATIONS ON FRACTIONS (fracprac;1976;unpublished)
Bailey, Keith; Lassner, David
Community College Math. Group, CERL, Univ. of Ill.
The lesson offers the student practice in performing common operations with fractions, and ends with a set of mixed exercises, the mastery of which is necessary to complete the lesson. The rules of each fraction operation are available to the student as well as brief quizzes in each section of the lesson.
none;60 minutes;high school and above

EXERCISES -- EQUAL FRACTIONS; MIXED NUMBERS (fracfun;1976;unpublished)
Bailey, Keith; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides drill practice and checkup quiz in reducing fractions and mixed number conversions.
none;15 minutes;basic mathematics students

FRACTION NAMES FOR DECIMAL NUMBERS (con;1976;unpublished)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The student is given practice writing common fraction and mixed number names for numbers expressed as decimals. There is a checkup included on decimal and fraction conversions at the end of the lesson to review the material covered in the lessons: "Decimal Names for Fractions" and "Fraction Names for Decimal Numbers".
none;lesson: 20-30 minutes, checkup: 3-5 minutes; basic math students

FRACTION NOTATION (fnotation;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces 1/4 as a short way to write one fourth. It teaches the student to write 1/4 on PLATO.
none;2-5 minutes;students of basic mathematics

FRACTIONS AND MIXED NUMBERS (tryeq;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice converting fractions to mixed numbers and vice versa. It is for students who have a basic understanding, but who need practice.
none;15-20 minutes;basic math. students

FRACTIONS BASKETBALL (drib;1975;1977)
Dugdale, Sharon; Kibbey, David; Cohen, Barry; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson offers subtraction practice on the number line. The form is that of a game for one or two students. Given ball and basket positions on the number line, the students bounce the ball some fraction or mixed number to make a basket. The game can be played with numbers with like or unlike denominators. Difficulty adjusts to performance.
none;open-ended;students of basic mathematics

HIGH WIRE (monkey;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson presents the addition of fractions on the number line with visual feedback about common denominators.
none;open-ended;students of basic mathematics

INEQUALITIES WITH LIKE DENOMINATORS (ineq;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson prepares the student for comparing fractions with unlike denominators.
none;5-10 minutes;basic math. students

INEQUALITIES WITH UNLIKE DENOMINATORS (ineq;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The file contains the lesson on comparing fractions with unlike denominators and also contains a checkup to see whether the student has mastered this material. The lesson develops a systematic method for comparing the size of 2 fractions with unlike denominators.
touch panel;lesson: 10-20 minutes, checkup: 3-5 minutes;basic math students

INTRODUCTION TO FRACTIONS (frint;1976;1978)
Bailey, Keith
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the concept of a fraction and teaches the distinction between the numerator and the denominator of a fraction.
none;60 minutes;basic mathematics students

INTRODUCTION TO MULTIPLYING MIXED NUMBERS (fmint;1976;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the multiplication of mixed numbers using a familiar multiplication model. The student writes multiplication number sentences to describe arrays of boxes. Difficulty adjusts to the student's performance.
none;open-ended;students of basic mathematics

INTRODUCTION TO RATIOS (ratios;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson provides a short introduction to mathematical ratios.
none;10 minutes;basic mathematics students

LIGHTS (lites;1975;1978)
Dugdale, Sharon; Kibbey, David; Lamprinos, Susan Frasier; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is one in the group of Fractions Curriculum lessons which teaches the "meaning of fractions". It offers the student practice in constructing and identifying fractions of a set of objects. The touch panel is used to turn on fractions of a set of light bulbs. After some success, PLATO turns on lights and the student identifies the fraction on.
touch panel;lesson: 5-15 minutes, checkup; 2-5 minutes;basic math students

MAKE-A-MONSTER (monster;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is in three parts. The first part re-emphasizes that 3/4 is 3 of a fourth and provides an experience with a new unit -- the cup. It also serves to familiarize the student with a model also useful for equivalent fractions found in part 2 of the lesson and common denominators explored in part 3.
touch panel;open-ended;students of basic mathematics

MIXED NUMBER MULTIPLICATION PRACTICE (fmdrill;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives practice in multiplying mixed numbers. There is also a checkup included in the same file with the lesson.
none;lesson: 30-60 minutes, checkup: 5-10 minutes;basic math students

MIXED NUMBER NOTATION (nlintrob;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson shows the student how to write mixed numbers on PLATO. It uses the number line for illustration.
none;open-ended;students of basic mathematics

MULTIPLICATION OF FRACTIONS (fmult;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson begins the subject of multiplication of fractions, using a familar multiplication model. It also introduces an algorithm for multiplication of fractions.
none;open-ended;students of basic mathematics

MULTIPLICATION PRACTICE, WITH PICTURES FOR HELP (fmpix;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson offers practice in multiplication of mixed numbers, with a familiar model available as the student needs it.
none;open-ended;students of basic mathematics

NEW ANSWER FORMAT (naf;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces a new way that a student's answer will look when she or he writes a fraction or mixed number on PLATO.
none;open-ended;students of basic mathematics

OBSTACLE COURSE (obs;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is in game format and provides experience with the addition and subtraction of decimals.
none;open-ended;students of basic mathematics

PAINT ADDITION (recad;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group
The lesson consists of three parts and a checkup. The first two parts, "PLATO Paints" and "You Paint", teach the addition of fractions with unlike denominators. The third part, "Your Choice", encourages the student to make up her or his own fraction addition problems and try painting problems in different ways. The checkup reviews the material.
touch panel;lesson: open-ended, checkup: 3-5 min.;basic math. students

PAINT AND COMPARE (reccomp;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces a method of comparing two fractions.
touch panel;open-ended;students of basic mathematics

PAINTINGS LIBRARY (reclib;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson consists of a library of students' "paintings". It encourages painting a fraction of a box different ways. It inititiates the idea of re-arranging the painted areas without changing the fraction painted and provides opportunities to notice equivalent fractions. The lesson also allows the students to share their work with each other.
touch panel;open-ended;students of basic mathematics

PICK A TUB (tubs;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience estimating positions of pure fractions on a number line. The lesson is in game format and can be played by one or two players.
touch panel;open-ended;students of basic mathematics

PINBALL (pinw;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The student practices basic number facts as a ball bounces from problem to problem as in a pinball machine. Points are earned by answering each problem within the time limit. The lesson keeps a list of 20 students who have made the highest scores.
none;open-ended;students of basic mathematics

PIZZA: ASSORTED PROBLEMS (pizza5;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen; et al.
U of I NSF Fractions Elem. Math. Group, CERL
This lesson is a composite of lessons "Pizza: Fractions," "Pizza: Cutter Stuck," "Pizza 2 Pizzas for 3 Kids," and "Pizza: Mixed Numbers Introduction." Problems from the four lessons are mixed together to create a sequence that may be more interesting and thought-provoking than each lesson done separately.
touch panel;1-2 hours;students of basic mathematics

PIZZA: COMMON DENOMINATOR (pcd;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience finding and using a common denominator with a familiar model.
touch panel;20-30 minutes;students of basic mathematics

PIZZA: CUTTER STUCK (pizza2;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen; et al.
U of I, NSF Fractions Elem. Math. Group, CERL
This lesson begins the instruction in equivalent fractions.
touch panel;20-30 minutes;students in basic mathematics

PIZZA: FRACTIONS (pizza1;1975,76,77;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is one of a series on mixed numbers and fractions. The lesson is designed to re-emphasize with a physical model that 3/4 is 3 of a fourth. The concept is extended to fractions >1.
touch panel;20-30 minutes;students of basic mathematics

PIZZA: MIXED NUMBERS INTRODUCTION (pizza4;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen; et al.
U of I NSF Fractions Elem. Math. Group, CERL
This lesson introduces the idea that a fraction and a mixed number can name the same number, then gives the student practice converting mixed numbers to pure fractions and vice versa.
touch panel;20-30 minutes;students of basic mathematics

PIZZA: 2 PIZZAS FOR 3 KIDS (pizza3;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen; et al.
U of I NSF Fractions Elem. Math. Group, CERL
This lesson relates fractions to division. It uses the pizza model to suggest that $x \div y$ is the same as the fraction x/y.
touch panel;20-30 minutes;students of basic mathematics

SIMPLEST TERMS (sterms;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson defines "simplest terms" and presents a systematic method for finding the simplest terms name for any fraction. The file contains not only the lesson, but a checkup for review of the material in the lesson.
none;lesson: open-ended, checkup: 3-5 minutes; basic math. students

SIMPLIFYING ANSWERS TO ADDITION PROBLEMS (pad1;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL
The lesson points out the need for simplifying the answer to an addition problem.
none;5-10 minutes;students of basic mathematics

SKYWRITING AND SPIDER WEB (sky;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL
The lesson allows a student to write a program to move an airplane around the screen. The lesson provides an experience with a new unit -- a turn, and experience with very basic programming ideas. It also allows students to share their programs with other students through the program library.
none;open-ended;students of basic mathematics

SORT EQUIVALENT FRACTIONS (sorteqf;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice identifying equivalent fractions. This is for students who already have a basic understanding of equivalent fractions. The lesson also contains a checkup reviewing the material in the lesson.
touch panel;lesson: 40-45 min., checkup: 3-5 min.;basic math. students

SORT EQUIVALENT MIXED NUMBERS (sorteqm;1978;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL

The lesson provides practice identifying equivalent mixed numbers. This is for students who already have a basic understanding of equivalent fractions and mixed numbers.

touch panel;30-45 minutes;students of basic mathematics

SORT EQUIVALENT PROBLEMS (sortad;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL

The lesson introduces the idea that renaming the numbers in an addition or subtraction problem makes another name for the same problem. The idea is useful when finding a common denominator for addition and subtraction.

touch panel;open-ended;students of basic mathematics

SORT NUMBER NAMES WITH DECIMALS (sortd;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL

The lesson gives practice identifying equivalent whole numbers, fractions, mixed numbers and decimal numbers.

none;open-ended;students of basic mathematics

SORT NUMBERS BY FORM (sortf;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL

The lesson gives the student practice in distinguishing "fractions", "mixed numbers", and "whole numbers". The lesson is essential for the understanding of the vocabulary used in further fractions lessons.

touch panel;5-15 minutes;students of basic mathematics

SPLASH! (pogo;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL

The lesson provides general experience relating and converting fractions to integers and mixed numbers. The lesson is in game format for one or two players.

none;open-ended;students of basic mathematics

STANDARD FORM PRACTICE (pad1;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL

The lesson gives the student practice in writing fractions and mixed numbers in standard form. There is also a checkup in the same file reviewing the material covered in this lesson.

none;lesson: 5-15 minutes, checkup: 2-5 minutes;basic math. students

STICKS AND STRINGS (rods;1975;1978)
Golden, William M; Dugdale, Sharon; Kibbey, David; et al.
Computer-based Education Research Lab., U of I
The lesson teaches the student a method for dividing a stick into fractional parts. Sticks of four different lengths are used. The lesson allows the student to construct halves and thirds of various lengths. The importance of the unit length is emphasized.
none;20-30 minutes;students of basic mathematics

STRATEGIES FOR LISTING EQUIVALENCE SETS (strad;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice adding and subtracting fractions and mixed numbers, using equivalence sets to find a common denominator; points out that more common denominators can be found by listing more names; develops strategies for listing names; and enables the student to solve addition and subtraction problems without relying on guidance from PLATO.
touch panel;open-ended;students of basic mathematics

STRATEGIES FOR MULTIPLYING MIXED NUMBERS (fmstrat;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson demonstrates that there are many ways to multiply mixed numbers. It encourages the student to examine each problem and to choose a method appropriate for the particular problem.
none;open-ended;students of basic mathematics

SUBTRACTION WITH BORROWING (pad2;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces a method for solving subtraction problems like 3 1/3 - 2/3.
touch panel;20-30 minutes;basic math. students

TARGET PRACTICE (rocket;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson presents addition practice which may encourage checking the answer by estimation.
none;open-ended;students of basic mathematics

TORPEDO!; DECIMAL TORPEDO; WHOLE NUMBER TORPEDO (sea;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
There are three parts to this lesson, each part being an interterminal game in which two students compete. The games provide practice estimating distances on the number line. Part 1 is for fractional distances, part 2 uses decimal numbers, and part 3 whole numbers for reading the number line scale and doing the distance estimation.
none;open-ended;students of basic mathematics

TRY THESE: EQUIVALENT FRACTIONS (tryeq;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice with equivalent fractions. It is for students who have a basic understanding of equivalent fractions, but who need practice. There is a checkup available for review of the material in the lesson.
none;the lesson: 20-30,min. the checkup: 3-5 min.; basic math. students

TRY THESE: EQUIVALENT MIXED NUMBERS (tryeq;1978;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice renaming mixed numbers as is done in addition and subtraction of mixed numbers. It is for students who already have a basic understanding, but need practice.
none;lesson: 20-30 minutes, checkup: 3-5 minutes;basic math. students

UNITS (funits;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
This lesson points out the importance of the unit. There are ten independent pages in the lesson. On each page some kids on the screen discuss a situation involving units.
none;10-20 minutes;students of basic mathematics

VOCABULARY: WHOLE NUMBER, FRACTION, MIXED NUMBER (nlintroc;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the vocabulary: whole numbers, fractions and mixed numbers, used in future lessons.
none;open-ended;students of basic mathematics

General

ABOUT NUMBER SENTENCES (zmathterms;1976;unpublished)
Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson introduces the term "number sentence" as a short way to write about mathematical things and how numbers are related. The student learns to write a number sentence.
none;one ten minute session;intermediate level elementary students

ANTWAR (zantwar;1976;unpublished)
Seiler, Bonnie Anderson; Fortner, Brand
U of I NSF Whole numbers Elem. Math. Group
The lesson provides a game situation for working story problems in which pictures of the problems are shown. The student learns to answer correctly word problems involving arrays, comparisons and sums.
none;open-ended;upper level elementary students

ASK (erswk;1977;1978)
Steinberg, Esther R
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This "twenty questions" type of game for guessing a number has a two-fold purpose: to give the student experience in generating questions which will provide maximum information and thus enable him/her to solve the problem in a minimum number of steps, and to provide a means of synthesizing and applying the student's general knowledge about numbers.
none;none;elementary students

BLACKBOARD (zbboard;1976;unpublished)
Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides a setting in which students can experiment with arithmetic expressions without having to perform computations. It provides practice in constructing arithmetic expressions with specified values.
touch panel;open-ended;upper level elementary students

FACTS: PRACTICE (facts;1977;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen; et al.
U of I NSF Elem. Math. Group, CERL
This lesson is intended for practice of number facts. Each session consists of ten number facts which the student must master. Each session continues until all the facts are mastered.
none;2-5 minutes repeatable;basic math students

GUESS THE NUMBER (wmg02;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
The student has to guess the number which the computer has randomly picked. The lowest number of questions before the correct guess means the highest score for the student. The student or the teacher can set the level of difficulty of the game.
none;variable;elementary school children

HORSE RACE: OPEN SENTENCE DRILL (zhorserace;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson is a game in which a student receives drill, practice and remediation in solving open sentences of several types: basic facts, multiplication by multiples of 10 and 100, division with remainders and signed number facts.
none;open-ended;intermediate level elementary students

HOW THE WEST WAS ONE + THREE x FOUR (zpiffle;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides a game-type situation in which the computational skills, ability to make combinations, and strategy win. Given three numbers, the student constructs a mathematical expression to put his playing piece in a good position on the game board and correctly evaluates the expression.
none;open-ended;upper level elementary students and older

HOW TO USE AND WRITE BOXES AND HEXES (boxes;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson helps the student to become familiar with the symbols used for variables in some of the Graphing Strand lessons.
none;1-5 minutes;elementary mathematics students

INDEX OF LESSONS BY THE PLATO ELEMENTARY MATHEMATICS PROJECT (math;1976;unpublished)
Kibbey, David
University of Illinois at Urbana-Champaign
This is an index of elementary mathematics lessons prepared for teachers planning a mathematics curriculum which will include lessons on Whole Numbers, Fractions and Mixed Numbers, Decimal Fractions, Graphs, Functions, Variables and Signed Numbers.
touch panel;variable;elementary level students

MAILBOX: A SKIP COUNTING LESSON (zmailman;1976;unpublished)
Seiler, Bonnie Anderson
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides practice in skip counting forward and backward by intervals greater than 10. The student can count forward and backward by intervals from 1 to 80, within a range of 1 to 999.
none;allows unlimited practice;upper level elementary students

MATH. FOR COMMUNITY COLLEGES AND ADULT EDUCATION (mathcc;1976;unpublished)
Community College Math. Group
Computer-based Edcuation Research Lab., Univ. of Ill.
The program is the index program for a series of lessons written for Community Colleges and Adult Education under a grant from the National Science Foundation. Lessons are available in Arithmetic, Algebra and Graphing, Geometry, Measurement and Trigonometry, and Probability.
none;variable;community college and adult education students

MENTAL ARITHMETIC (wmg01; 1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
The program presents mental arithmetic problems involving addition, subtraction and multiplication. The problems are grouped according to difficulty. The student races against time. The solution time may be varied by the teacher and the computer then speeds up the allocated time as the participant becomes more proficient.
none;open-ended;elementary school children

MIXED DRILL + - x ÷ (wmg08;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides practice with addition, subtraction, multiplication and division.
none;none;elementary school children

NUMBER GAMES FOR TODAY (dates;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson provides experience in generating arithmetic expressions with a given number, increases flexibility in generating arithmetic expressions, and broadens experience with arithmetic expressions by exposure to expressions generated by other children.
none;open-ended;elementary mathematics students

ONE MILLION (zmillion;1976;unpublished)
Weaver, Charles S
U of I NSF Whole Numbers Ele. Math. Group
The lesson gives students practice skip counting and gives them some idea how big one million is. The student can count forward by steps of size 1 to 10. He will become aware of relative magnitudes of numbers by studying this lesson.
none;unlimited repeats;upper level elementary students

PICO-FOMI (picofomi;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is a guessing game in which the student tries to figure out PLATO's number. A choice of playing a 2-digit game (easier) or 3-digit game (harder) is given. A record is kept of the numbers already guessed.
none;open-ended;elementary mathematics students

PRACTICE WRITING PROBLEMS (zprobprac;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I Whole Numbers Elem. Math. Group
The lesson gives the student practice in going back and forth between different ways of writing problems and different forms of simple word problems. The student learns to recognize the operation involved in a simple given word problem and to fill in a different word problem with the same numbers in a way that gives the same answer.
none;unlimited repetitions possible;upper level elementary students

PROBABILITY GAME (wmg04;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
A probability game is presented in which the student indicates whether the number the computer presents is the largest, smallest or neither in a list of ten numbers chosen by the computer. Games are short, but one can play successive ones and the score is accumulative.
touch panel optional;2 or 3 minutes;elementary school children

REAL LIFE STORY PROBLEMS (zconcepts;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I NSF Whole Number Elem. Math. Group
The lesson provides practice in applying the meanings of the arithmetic operations to word problems and in expressing word problems in mathematical terms. The student is given word problems involving addition, subtraction, multiplication and division and he writes an appropriate open sentence or gives the correct answer and operation needed.
none;one 10 minute segment, unlimited repeats;elementary students

SKIP COUNTING (wmg05;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This program is an exercise in counting by 5's, or other numbers. Three levels of difficulty are offered the student.
none;none;elementary school children

SOME LESSONS ON ARITHMETIC EXPRESIONS (zmydear;1976;unpublished)
Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson consists of four sections on arithmetic expressions: "My Dear Aunt Sally" (order of operations), "Parentheses" (use of parentheses in arithmetic expressons), "Making Numbers" (practice in evaluating simple expressions) and "Undo It" (practice in inverse arithmetic expressions).
none;open-ended;upper level elementary students

SPEEDWAY (FACTS DRILL) (zspeedway;1976;unpublished)
Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson is an educational game to improve the student's speed with number facts. A game situation is provided for drill, practice, and remediation in the basic number facts involving the four basic operations.
none;open-ended;intermediate level elementary students

TRUE-FALSE GAME (znumgame;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides practice in writing number sentences involving inequalities, decimals and fractions. The student has to determine whether number sentences are true or false. The lesson is in game format with three versions available for the student's choice.
none;open-ended;upper level elementary students

VOCABULARY: WHOLE NUMBER, FRACTION, MIXED NUMBER (ηlintroc;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the vocabulary: whole numbers, fractions and mixed numbers, used in future lessons.
none;open-ended;students of basic mathematics

WHAT'S THE OPERATION? (bsigns;1977;1979)
Schultz, Barbara
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson gives the user practice in identifying mathematical operations. An equation is presented, and the student must decide whether it has been added, subtracted, multiplied or divided.
touch panel optional;open-ended;elementary mathematics students

WHOLE NUMBER OPERATIONS PRACTICE (ops;1977;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is intended for review practice of whole number operations. It is not a teaching lesson and does not offer help. It is intended to give the student quick practice in skills they have already learned in addition, subtraction, multiplication and division.
none;2-5 minutes/session;basic math. students

YOURWAY (zyourway;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Zielinski, Robert
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson gives students the opportunity to show how they worked problems and exposes them to the way other students work their problems. The lesson is a "practice" type lesson.
none;open-ended;intermediate level elementary students

Graphing

A CHECKUP FOR PLACING POINTS ON A GRID (tttckp;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson that checks the student's ability to plot points, either a point is given and the student supplies the number pair, or the student is given a pair of numbers and he plots the point.
none;10 minutes;elementary mathematics students

CIRCLE STUFF (circles;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is an exercise in circle plotting.
none;open-ended;elementary mathematics students and general

EXPERIMENTING WITH ELLIPSES (ellipse;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student is asked to supply two numbers (A and B) in an open sentence. PLATO then plots the graph.
none;open-ended;elementary mathematics students

EXPERIMENTING WITH LINEAR GRAPHS (grafexp;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student is asked to supply values for the variables in four open sentences; PLATO plots the numbers.
none;5-10 minutes;elementary mathematics students

EXPERIMENTING WITH PARABOLAS (parab;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student is asked to supply a value for the variable in an open sentence. PLATO then graphs the sentence. As many sentences can be graphed as the student chooses; the previous equations and plotted symbols remain on the screen for comparison.
none;open-ended;elementary mathematics students

EXPERIMENTS WITH HYPERBOLAS (hyper;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student is asked to supply a value for the variable in an open sentence. PLATO then graphs the sentence. As many sentences can be graphed as the student chooses; the previous equations and plotted symbols remain on the screen for comparison.
none;open-ended;elementary mathematics students

GRAPHING box + hex = 6 (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math Group, Urbana, Ill.
In this lesson, the student is asked to supply a pair of numbers for the variables to make the open sentence "box + hex = 6" true. In the last part of the lesson, the student plots points on a graph.
none;5-10 minutes;elementary mathematics students

GRAPHING box + hex = 7 (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math Group, Urbana, Ill.
In this lesson, the student is asked to supply a pair of numbers for the variables to make the open sentence "box + hex = 7" true. In the last part of the lesson, the student plots points on a graph. (Except for a slightly different sentence, this lesson is like "box + hex = 6.")
none;5-10 minutes;elementary mathematics students

INTRODUCTION TO LINEAR GRAPHING (1,2,3) (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this three part lesson, the student graphs pairs of numbers that make the given open sentence true. There is a geometric pattern which is related to the open sentence and the pairs of numbers.
none;15-20 minutes;elementary mathematics students

LINEAR GRAPHING CHECKUP: INTERCEPTS AND SLOPES (grafchek;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is to be used after the student has completed the lesson "Linear Graphs: Intercept" and "Linear Graphs: Slope". A graph is shown and the student is asked to find an open sentence for it and supply values for the variables. There are three sentences to complete.
none;none;elementary mathematics students

LINEAR GRAPHS: INTERCEPT (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student plots the variables on a graph that satisfy three different open sentences. For these examples, the slope is constant and the intercept changes. The student is asked to study the graphs and see how they differ.
none;10-15 minutes;elementary mathematics students

LINEAR GRAPHS: SLOPE (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student plots the variables on a graph that satisfy three different open sentences. For these examples, the intercept is constant and the slope changes. The student is asked to study the graphs and see how they differ.
none;10-15 minutes;elementary mathematics students

MAKING UP OPEN SENTENCES (makeopsen;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student is asked to make up an open sentence and then provide a value to make it true. The student can look at a list of other students' open sentences and try to solve those.
none;open-ended;elementary mathematics students

MATH. FOR COMMUNITY COLLEGES AND ADULT EDUCATION (mathcc;1976;unpublished)
Community College Math. Group
Computer-based Edcuation Research Lab., Univ. of Ill.
The program is the index program for a series of lessons written for Community Colleges and Adult Education under a grant from the National Science Foundation. Lessons are available in Arithmetic, Algebra and Graphing, Geometry, Measurement and Trigonometry, and Probability.
none;variable;community college and adult education students

OVER-UP PATTERNS IN LINEAR GRAPHING (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson examines the "over and up" patterns of graphing pairs of numbers that satisfy an open sentence.
none;10-15 minutes;elementary mathematics students

PLATO GRAPHS YOUR FUNCTIONS (easygraph;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student is asked to write a function in terms of x and PLATO plots its graph.
none;open-ended;elementary mathematics students and general

PROBLEMS WITH LINEAR GRAPHS (grafexp2;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This is a lesson made up of seven different questions for the student to work, testing his knowledge of graphs and open sentences.
none;open-ended;elementary mathematics students

TIC TAC TOE (ttt;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is a game in which the student places points on a grid using pairs of numbers. To win the game, the student must get four continuous x's or o's in a row. Two people can play against each other, or one can play against PLATO.
none;open-ended;elementary mathematics students

Mixed numbers

ADDITION AND SUBTRACTING WITH SIMPLIFYING AND BORROWING (pad2;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience adding and subtracting fractions and mixed numbers, simplifying answers and "borrowing" when necessary. A checkup on the material in this lesson is included.
none;lesson: 20-30 minutes, checkup: 5-10 minutes;basic math. students

ADDITION AND SUBTRACTION DRILL: LIKE AND UNLIKE DENOM. (tryad;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives practice in adding and subtracting fractions and mixed numbers with like and unlike denominators. The lesson is intended for students who have a basic understanding, but who need practice.
none;part 1: 30-60 minutes, part2: 1-1/2 hours;basic math students

ADDITION AND SUBTRACTION OF MIXED NUMBERS WITH LIKE DENOM. (pad1;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the subject of addition and subtraction of fractions and mixed numbers with like denominators.
touch panel;20-30 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: PART 1 (hs1;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the addition of fractions and mixed numbers with unlike denominators. It also introduces an approach to problem-solving.
none;5-10 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: REVIEW (hsrev; 1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson summarizes and reviews the strategy for adding and subtracting fractions with unlike denominators.
none;10-20 minutes;students of basic mathematics

ADDITION PRACTICE, SIMPLIFYING ANSWERS (pad1;1975;1975)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience adding fractions and mixed numbers with like denominators, simplifying answers when necessary.
none;20-30 minutes;students of basic mathematics

FRACTIONS AND MIXED NUMBERS (tryeq;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice converting fractions to mixed numbers and vice versa. It is for students who have a basic understanding, but who need practice.
none;15-20 minutes;basic math. students

INTRODUCTION TO MULTIPLYING MIXED NUMBERS (fmint;1976;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the multiplication of mixed numbers using a familiar multiplication model. The student writes multiplication number sentences to describe arrays of boxes. Difficulty adjusts to the student's performance.
none;open-ended;students of basic mathematics

MIXED NUMBER MULTIPLICATION PRACTICE (fmdrill;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives practice in multiplying mixed numbers. There is also a checkup included in the same file with the lesson.
none;lesson: 30-60 minutes, checkup: 5-10 minutes;basic math students

MIXED NUMBER NOTATION (nlintrob;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson shows the student how to write mixed numbers on PLATO. It uses the number line for illustration.
none;open-ended;students of basic mathematics

MULTIPLICATION PRACTICE, WITH PICTURES FOR HELP (fmpix;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson offers practice in multiplication of mixed numbers, with a familiar model available as the student needs it.
none;open-ended;students of basic mathematics

NEW ANSWER FORMAT (naf;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces a new way that a student's answer will look when she or he writes a fraction or mixed number on PLATO.
none;open-ended;students of basic mathematics

SORT EQUIVALENT MIXED NUMBERS (sorteqm;1978;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice identifying equivalent mixed numbers. This is for students who already have a basic understanding of equivalent fractions and mixed numbers.
touch panel;30-45 minutes;students of basic mathematics

SORT NUMBER NAMES WITH DECIMALS (sortd;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives practice identifying equivalent whole numbers, fractions, mixed numbers and decimal numbers.
none;open-ended;students of basic mathematics

SORT NUMBERS BY FORM (sortf;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives the student practice in distinguishing "fractions", "mixed numbers", and "whole numbers". The lesson is essential for the understanding of the vocabulary used in further fractions lessons.
touch panel;5-15 minutes;students of basic mathematics

SPLASH! (pogo;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides general experience relating and converting fractions to integers and mixed numbers. The lesson is in game format for one or two players.
none;open-ended;students of basic mathematics

STANDARD FORM PRACTICE (pad1;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives the student practice in writing fractions and mixed numbers in standard form. There is also a checkup in the same file reviewing the material covered in this lesson.
none;lesson: 5-15 minutes, checkup: 2-5 minutes;basic math. students

STRATEGIES FOR MULTIPLYING MIXED NUMBERS (fmstrat;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson demonstrates that there are many ways to multiply mixed numbers. It encourages the student to examine each problem and to choose a method appropriate for the particular problem.
none;open-ended;students of basic mathematics

TRY THESE: EQUIVALENT MIXED NUMBERS (tryeq;1978;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice renaming mixed numbers as is done in addition and subtraction of mixed numbers. It is for students who already have a basic understanding, but need practice.
none;lesson: 20-30 minutes, checkup: 3-5 minutes;basic math. students

VOCABULARY: WHOLE NUMBER, FRACTION, MIXED NUMBER (nlintroc;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the vocabulary: whole numbers, fractions and mixed numbers, used in future lessons.
none;open-ended;students of basic mathematics

Multiplication

ADDITION, SUBTRACTION AND MULTIPLICATION OF SIGNED NUMBERS (bank;1974;1978)
Cohen, Donald; Glynn, Jerry; Weaver, Tamar A; et al.
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches arithmetic of signed numbers and provides practice in adding and multiplying of signed numbers.
none;60 minutes;basic mathematics students

AREAS (zareas;1976;unpublished)
Steinberg, Esther R; Wax, Saul
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson provides the student with experience which relates multiplication and area.

The lesson was designed by Esther Steinberg.
none;three 10 minute segments, repeatable;elementary students

ARRAYS (zarrays;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson relates two multiplication number sentences to an array of dots. It also introduces the term "array".
none;three ten minute segments;intermediate level elementary students

CHAPTER CHECKUPS (zmodcheck;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson offers checkup problems for multiplication meanings, techniques and subtraction ("countdown" and "facts" methods), and the multiplication algorithm as well as division concepts.
none;open-ended;intermediate level elementary students

CHECK-UP ON MANY-DIGIT MULTIPLICATION (mult2check;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Felty, Michael
U of I NSF Whole Numbers Elem. Math. Group
The lesson tests the student's ability to use the standard algorithm to multiply several digit numbers by two- or three-digit numbers.
none;one 10 minute segment, repeatable;elementary students

CHECK-UP ON ONE-DIGIT MULTIPLICATION (multcheck;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Wilson, James H
U of I NSF Whole Number Elem. Math. Group
The lesson tests the student's ability to use the standard algorithm to multiply several digit numbers by a one-digit number.
none;one session with repeats if necessary;upper level elementary students

CLAIM GAME (FACTORS) (zclaim; 1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson gives the students practice in recognizing factors of numbers up to 36. It is a two person game.
none;open-ended;upper level elementary students

DOUBLE SIGNS (FLIPPING) AND MULTIPLICATION (PATTERNS) (signmult;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a concrete visual model for getting rid of double signs and a simple introduction to the rules for multiplying signed numbers.
none;15 minutes;basic mathematics students

EGG FACTORY (zcrate;1976;unpublished)
Seiler, Bonnie Anderson; Cohen, Paul
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson provides a model for experiences with renaming a number using the operations of multiplication and addition. The situation provides a natural reason for multiplication's preceding addition.
none;six 10 minute segments, 1 repeat;elem. students

EGG FACTORY WITHOUT THE HEN (znonhen;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson gives the student practice in interpreting certain number sentences in terms of the crate and basket model, without seeing a picture.
none;one 10 minute segment, repeatable;elem. students

INTRODUCTION TO MULTIPLICATION (wmg06;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
Counting practice is presented as an introduction to multiplication. The student or the teacher can set the level of difficulty for the problems.
none;none;elementary level students

INTRODUCTION TO MULTIPLYING MIXED NUMBERS (fmint;1976;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the multiplication of mixed numbers using a familiar multiplication model. The student writes multiplication number sentences to describe arrays of boxes. Difficulty adjusts to the student's performance.
none;open-ended;students of basic mathematics

LARGE PARKING LOT (zparklot2;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Steinberg, Esther R; et al.
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson demonstrates one method for calculating the number of objects in a large array: breaking up the array into several smaller arrays.
none;2 10 minute segments, last one repeats;elementary students

LINES AND CROSSING POINTS (zcross; 1976;unpublished)
Steinberg, Esther R
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson provides a situation in which students make arrays that have specified products, and specified sums of factors.
none;five 10 minute segments;upper level elementary students

MAKE THE ARRAY (zarrays2;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson guides the student in making an array to illustrate a multiplication number sentence.
touch panel;two 10 minute segments;elem. students

MIXED NUMBER MULTIPLICATION PRACTICE (fmdrill;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives practice in multiplying mixed numbers. There is also a checkup included in the same file with the lesson.
none;lesson: 30-60 minutes; checkup: 5-10 minutes;basis math students

MULTIPLICATION (run;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches multiplication of signed numbers by using a concrete visual model -- the running man.
none;45 minutes;basic mathematics students

MULTIPLICATION IS REPEATED ADDITION AND IS ARRAYS (zmultmeans;1976;unpublished)
Seiler, Bonnie Anderson; Arthur, Charles; Miller, Marc
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson relates multiplication to repeated addition and arrays. The models used in previous lessons (Rubber Stamp, Egg Factory, Parking Lot) are mentioned along with new contexts.
none;two ten minute sessions;intermediate level elementary students

MULTIPLICATION MISSION IMPOSSIBLE (zmulttech;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson provides practice using a variety of techniques in order to solve problems selected by PLATO.
none;2 10 minute segments to be repeated;elementary students

MULTIPLICATION PRACTICE, WITH PICTURES FOR HELP (fmpix;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson offers practice in multiplication of mixed numbers, with a familiar model available as the student needs it.
none;open-ended;students of basic mathematics

MULTIPLICATION USING WHAT YOU KNOW (zwhat;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson provides practice for using the distributive law to work multiplication problems; that is, to work multiplication problems by adding together the answers to related smaller problems.
none;none;intermediate level elementary students

MULTIPLY BY BREAKING UP (zbreak;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Campanini, Sue
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson introduces the technique of "breaking up a number" in order to solve a multiplication problem. The lesson is another in the series on multiplication techniques. The objective is to teach the student how to use the right distributive law to solve multiplication problems.
none;three ten minute segments;intermediate level elementary students

MULTIPLY BY BUILDING UP (zmultaccum;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Campanini, Sue
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson is another in the series on multiplication techniques. This one demonstrates that a multiplication problem can be solved by building up from an easy problem to the final one.
none;two ten minute sessions;intermediate level elementary students

MULTIPLY BY DOUBLING (zdouble;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson in the series on multiplication techniques introduces "doubling" as a technique in solving multiplication problems. The student is taught how to double and redouble one factor in order to solve such a problem.
touch panel;two ten minute sessions;elementary students

MULTIPLY BY 10'S AND 100'S (zmulta2;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Felty, Michael
U of I NSF Elem. Math. Group
The lesson teaches the student to multiply by numbers having one non-zero digit using the standard algorithm, multiplication by the one digit number and "adding zeros" as in a problem like 768x200.
none;one or two 10 minute sessions, repeatable;elementary students

MULTIPLY ON THE NUMBERLINE (zmline;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Wilson, James H
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson introduces the technique of using the numberline to solve multiplication problems.
none;open-ended;intermediate level elementary students

MULTIPLY USING ADDITION (zfiguring;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson is the first of a series on the seven techniques of multiplication, especially relating the techniques to the meanings of multiplication that were covered in other lessons. There are no explicit references to the efficiency or suitability of a given technique for a given problem. It is hoped the student will learn this through exploration.
touch panel;two 10 minute segments;elem. students

MULTIPLY USING ARRAYS (zfiguringa;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson in the series on multiplication techniques relates the arrays meaning of multiplication to general multiplication problem solving.
touch panel;two 10 minute sessions;elem. students

MULTIPLYING BY LARGE NUMBERS (zmultalg;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson teaches the multiplication algorithm in a way that relates it to previously taught techniques.
none;3 to 5 ten minute sessions, repeatable;elementary students

ONE-DIGIT ALGORITHM INTRODUCTION (zmulta1;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson teaches the algorithm for multiplying by one-digit numbers in a way that fosters understanding of its meaning.
none;2 - 5 sessions, sometimes repeated;elementary students

PARKING LOT (zparklot1;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Steinberg, Esther R; et al.
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson provides experience with arrays, allowing students to determine the total number of objects by any method he chooses. Suggests student form an answer as soon as there is one car in each row and in each column. Serves as a readiness lesson for "Cutting Large Parking Lots".
none;2 10 minute segments, repeatable;elementary students

RUBBER STAMP AND MORE RUBBER STAMP (zstamp;1976;unpublished)
Leiser, David; Fortner, Brand; Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson introduces a model which later relates repeated addition to multiplication. It emphasizes the correspondence between a picture and a number sentence, and it shows how an addition number sequence can be interpreted in words.
touch panel;4 ten minute segments;elem. students

SKIP COUNTING (wmg05;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This program is an exercise in counting by 5's, or other numbers. Three levels of difficulty are offered the student.
none;none;elementary school children

THE STEP BY STEP METHOD OF MULTIPLYING (zbill2;1975;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Bonetti, William
U of I NSF Whole Nummer Elem. Math. Group
The lesson gives the student practice in solving multiplication problems using the "on paper" vertical method. He may let PLATO present problems to him or make up his own.
none;open-ended;upper level elementary students

STRATEGIES FOR MULTIPLYING MIXED NUMBERS (fmstrat;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson demonstrates that there are many ways to multiply mixed numbers. It encourages the student to examine each problem and to choose a method appropriate for the particular problem.
none;open-ended;students of basic mathematics

WAYS TO MULTIPLY (zmultiply;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson provides practice with the techniques of multiplication and emphasizes that there are many different ways to solve a multiplication problem.
none;one ten minute segment with repeats possible; elementary students

WHOLE NUMBER OPERATIONS PRACTICE (ops;1977;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is intended for review practice of whole number operations. It is not a teaching lesson and does not offer help. It is intended to give the student quick practice in skills they have already learned in addition, subtraction, multiplication and division.
none;2-5 minutes/session;basic math. students

Numbers, Real

GUESS MY NUMBER (zguess;1972;1978)
Steinberg, Esther R
Computer-based Educ. Res. Lab., Univ. of Ill.
This is a lesson about number concepts and the number line. Both integers and decimals are considered.
none;none;intermediate level elementary students

Place value

CANDY FACTORY (candy;1975;1978)
Dugdale, Sharon; Kibbey, David
U of I NSF Elem. Math. Group, CERL
The lesson is a beginning lesson in place value. The student practices grouping by packaging candies.
none;open-ended;primary grade students

CANDY WAREHOUSE (candywh;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Elem. Math. Group, CERL
This is a beginning lesson in place value. The student practices manipulating objects (adding, subtracting and regrouping) in base five by filling orders in a candy warehouse.
none;open-ended;primary grade students

NUMBERS IN WORDS (kbignum;1977;unpublished)
Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson allows students practice in going back and forth between numbers written in words and in place value notation.
none;open-ended;upper level elementary students

ONE MILLION (zmillion;1976;unpublished)
Weaver, Charles S
U of I NSF Whole Numbers Ele. Math. Group
The lesson gives students practice skip counting and gives them some idea how big one million is. The student can count forward by steps of size 1 to 10. He will become aware of relative magnitudes of numbers by studying this lesson.
none;unlimited repeats;upper level elementary students

PLACE VALUE PROBLEMS (zplaceval;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Wilson, James H
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides practice on place value skills needed to learn the multiplication algorithm. The student learns to multiply by 10's, 100's and 1000's, to tell how much each digit in a 4 place base ten number stands for, and to break up a 4 digit number into units, tens, hundreds and thousands.
none;3 to 5 short sessions and unlimited repeats;elementary students

WHEEL OF FORTUNE (zfortune;1976;unpublished)
Wilmot, James
U of I NSF Whole Numbers Elem. Math. Group
The lesson gives the student practice interpreting word numerals. The student is taught to write any standard word numeral up to eight digits. The lesson is in game format.
none;open-ended;upper level elementary students

Signed numbers

ADDING AND SUBTRACTING ON THE NUMBER LINE (signum;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the number line, the negative numbers, and teaches order on the number line. It also teaches a number line model of adding and subtracting signed numbers and includes practice problems.
none;45 minutes;basic mathematics students

ADDING AND SUBTRACTING SIGNED NUMBERS (post;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana IL
This lesson is a model for the operation of addition and subtraction of signed numbers to enable the students to work with statements like +3 - -2 = +5.
none;10 minutes;elementary mathematics students

ADDITION OF SIGNED NUMBERS (signadd;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the number line and negative numbers and teaches order on the number line. It also presents a number line model of adding signed numbers and practice problems of the same.
none;35 minutes;basic mathematics students

ADDITION, SUBTRACTION AND MULTIPLICATION OF SIGNED NUMBERS (bank;1974;1978)
Cohen, Donald; Glynn, Jerry; Weaver, Tamar A; et al.
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches arithmetic of signed numbers and provides practice in adding and multiplying of signed numbers.
none;60 minutes;basic mathematics students

THE DISTRIBUTIVE LAW (dist;1976;1978)
Weaver, Tamar A; Baillie, Robert
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a graphic model for the distributive law and practice on the distributive law with signed numbers and variables.
none;30 minutes;elementary algebra students

DIVISION OF SIGNED NUMBERS (divide;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., Univ. of Illinois
The lesson presents an introduction and practice on division of signed numbers.
none;10 minutes;basic mathematics students

DOUBLE SIGNS (FLIPPING) AND MULTIPLICATION (PATTERNS) (signmult;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a concrete visual model for getting rid of double signs and a simple introduction to the rules for multiplying signed numbers.
none;15 minutes;basic mathematics students

EXERCISES -- ADDING AND SUBTRACTING (signprac;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides drill practice in adding and subtracting signed numbers and a posttest for these skills.
none;30 minutes;basic mathematics students

INTRODUCTION TO SIGNED NUMBERS (ANT HILL) (ants;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
The purpose of this lesson is to introduce signed (positive and negative) numbers. There is a model used to illustrate the principle in which the student adds and subtracts ants from an ant hill. After completion of the lesson, the student will be able to recognize signed numbers and solve a problem such as: 3-7= -4.
none;10-15 minutes;elementary mathematics students

INTRODUCTION -- THERMOMETER, SEA LEVEL (signex;1976;unpublished)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson presents a quick and easy introduction to the number line and signed numbers by using temperature and sea level.
none;5-10 minuttes;basic mathematics students

MULTIPLICATION (run;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches multiplication of signed numbers by using a concrete visual model -- the running man.
none;45 minutes;basic mathematics students

MULTIPLICATION OF SIGNED NUMBERS (postmult;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is a model for the operation of multiplication of signed numbers to enable the student to work with statements like +2 × -3 = -6.
none;10 minutes;elementary mathematics students

SIGNED NUMBER WORD PROBLEMS ON TEMPERATURE AND SEA LEVEL (wordp;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson offers practice with word problems involving subtraction of signed numbers.
none;15 minutes;basic mathematics students

SUBTRACTING SIGNED NUMBERS (signsub;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches a number line model of subtracting signed numbers and offers practice.
none;25 minutes;basic mathematics students

Square root

FINDING THE SQUARE ROOT (sqrt;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides three methods for finding square roots:
a. Guessing and Adjusting
b. Newton's Method
c. The Square Root Algorithm
none;30 minutes;basic mathematics students

Arithmetic

Subtraction

ADDING AND SUBTRACTING ON THE NUMBER LINE (signum;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the number line, the negative numbers, and teaches order on the number line. It also teaches a number line model of adding and subtracting signed numbers and includes practice problems.
none;45 minutes;basic mathematics students

ADDITION, SUBTRACTION AND MULTIPLICATION OF SIGNED NUMBERS (bank;1974;1978)
Cohen, Donald; Glynn, Jerry; Weaver, Tamar A; et al.
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches arithmetic of signed numbers and provides practice in adding and multiplying of signed numbers.
none;60 minutes;basic mathematics students

BEEHIVE (bees;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Elem. Math. Group, CERL
The purpose of the lesson is to give the student experience with beginning subtraction. The student is given feedback at the end of the lesson to show how well he has done.
none;5-15 minutes;primary grade students

CHAPTER CHECKUPS (zmodcheck;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson offers checkup problems for multiplication meanings, techniques and subtraction ("countdown" and "facts" methods), and the multiplication algorithm as well as division concepts.
none;open-ended;intermediate level elementary students

COUNTDOWN (zcountdown;1976;unpublished)
Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson introduces the idea of subtracting by counting backwards by tens and units and provides practice using that technique.
none;10 minute session repeated until mastered;elementary students

EXERCISES -- ADDING AND SUBTRACTING (signprac;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides drill practice in adding and subtracting signed numbers and a posttest for these skills.
none;30 minutes;basic mathematics students

MENTAL COUNTDOWN (zcountdow2;1976;unpublished)
  Seiler, Bonnie Anderson
  U of I NSF Elem. Math. Group, Urbana, Illinois
    The lesson provides explicit instruction and practice in mental subtraction by counting backwards. It is a sequel to lesson "zcountdown".
  none;three sessions,repeatable;elementary students

NUMBER ACCUMULATOR (accum;1978;unpublished)
  Graph. Strand Elem. Math. Group
  U of I NSF Elem. Math. Group, Urbana, Ill.
    This is a lesson which allows the student to practice adding and subtracting numbers to equal the number given by PLATO.
  touch panel;open-ended;elementary mathematics students

PROBLEM MACHINE (zpmachine;1976;unpublished)
  Whole Number Elem. Math. Group
  U of I NSF Elem. Math. Group, Urbana, Illinois
    The lesson helps the student understand the addition and subtraction algorithms by showing him incorrect problems and having him adjust one of the numbers in the problem to make it correct.
  none;open-ended;intermediate level elementary students

SPACE PORT (port;1975;1978)
  Dugdale, Sharon
  U of I NSF Elem. Math. Group, CERL
    The lesson provides experience with easy function rules.
  none;open-ended;primary grade students

SUBTRACTING IN YOUR HEAD (zsubways;1976;unpublished)
  Whole Number Elem. Math. Group
  U of I NSF Elem. Math. Group, Urbana, Illinois
    The lesson gives the student the opportunity to compare and practice the "countdown" and "facts" methods of mental arithmetic.
  none;one 10 minute session, repeatable;elementary students

SUBTRACTING SIGNED NUMBERS (signsub;1976;1978)
  Weaver, Tamar A
  Comp.-based Educ. Res. Lab., University of Illinois
    This lesson teaches a number line model of subtracting signed numbers and offers practice.
  none;25 minutes;basic mathematics students

SUBTRACTION CHECKUP; VERT. SUBTRACTION; SUBTRACTION POSTTEST
(zsticksv;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Steinberg, Esther R; et al.
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson presents a checkup on the student to see if he can use the subtraction algorithm correctly following the instructional lessons. A student who does not meet criteria will receive more practice and then be tested again. A student who passes the posttest has completed the subtraction sequence.
none;one 10 minute segment, repeatable;elem. students

SUBTRACTION WITH BORROWING (wmg07;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
The lesson presents a series of subtraction problems.
none;none;elementary school children

SUBTRACTION WITH STICKS (zsticks;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Steinberg, Esther R; et al.
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson is in two parts. The first part establishes a model for subtraction using bundles of ten sticks and single sticks. "Borrowing" is done by opening a bundle into ten loose sticks. The second part relates the stick model to the standard subtraction algorithm so that the student can work vertical 2-digit subtraction problems.
none;two or three 10 minute segments per part;elementary students

WHOLE NUMBER OPERATIONS PRACTICE (ops;1977;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is intended for review practice of whole number operations. It is not a teaching lesson and does not offer help. It is intended to give the student quick practice in skills they have already learned in addition, subtraction, multiplication and division.
none;2-5 minutes/session;basic math. students

Units

SKYWRITING AND SPIDER WEB (sky;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL
The lesson allows a student to write a program to move an airplane around the screen. The lesson provides an experience with a new unit -- a turn, and experience with very basic programming ideas. It also allows students to share their programs with other students through the program library.
none;open-ended;students of basic mathematics

UNITS (funits;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
This lesson points out the importance of the unit. There are ten independent pages in the lesson. On each page some kids on the screen discuss a situation involving units.
none;10-20 minutes;students of basic mathematics

Variables

EQUIVALENT OPEN SENTENCES (solution;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
An open sentence and its solution set are displayed and the student is asked to write several open sentences that have the same solution set. This is a check-up lesson.
none;10 minutes;elementary mathematics students

EXPERIMENTING WITH LINEAR GRAPHS (grafexp;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student is asked to supply values for the variables in four open sentences; PLATO plots the numbers.
none;5-10 minutes;elementary mathematics students

GENERALIZING OPEN SENTENCES (geneq;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lessons asks the student to make up a "machine" that will solve all open sentences of one kind.
none;open-ended;elementary mathematics students

GRAPHING box + hex = 6 (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math Group, Urbana, Ill.
In this lesson, the student is asked to supply a pair of numbers for the variables to make the open sentence "box + hex = 6" true. In the last part of the lesson, the student plots points on a graph.
none;5-10 minutes;elementary mathematics students

GRAPHING box + hex = 7 (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math Group, Urbana, Ill.
In this lesson, the student is asked to supply a pair of numbers for the variables to make the open sentence "box + hex = 7" true. In the last part of the lesson, the student plots points on a graph. (Except for a slightly different sentence, this lesson is like "Box + Hex = 6.")
none;5-10 minutes;elementary mathematics students

GUESS MY RULE (gmr;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson asks the student to write an open sentence or a rule, after selecting and studying four pairs of numbers. The sentence must be true for all number pairs.
none;open-ended;elementary mathematics students

INTRODUCTION TO LINEAR GRAPHING (1,2,3) (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this three part lesson, the student graphs pairs of numbers that make the given open sentence true. There is a geometric pattern which is related to the open sentence and the pairs of numbers.
none;15-20 minutes;elementary mathematics students

LINEAR GRAPHING CHECKUP: INTERCEPTS AND SLOPES (grafchek;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is to be used after the student has completed the lesson "Linear Graphs: Intercept" and "Linear Graphs: Slope". A graph is shown and the student is asked to find an open sentence for it and supply values for the variables. There are three sentences to complete.
none;none;elementary mathematics students

LINEAR GRAPHS: INTERCEPT (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student plots the variables on a graph that satisfy three different open sentences. For these examples, the slope is constant and the intercept changes. The student is asked to study the graphs and see how they differ.
none;10-15 minutes;elementary mathematics students

LINEAR GRAPHS: SLOPE (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student plots the variables on a graph that satisfy three different open sentences. For these examples, the intercept is constant and the slope changes. The student is asked to study the graphs and see how they differ.
none;10-15 minutes;elementary mathematics students

MAKING UP IDENTITIES (identity;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.

In this lesson the student is told that an identity is an open sentence that is true for all legal substitutions and is given a couple of examples. The student is then asked to make up three identities. Upon completion of each identity the student can look at a list of identities which were done by other students.

none;10 minutes;elementary mathematics students

OPEN SENTENCES TO TABLE (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.

In this lesson the student is asked to think of four pairs of numbers to make an open sentence true.

none;5 minutes;elementary mathematics students

OVER-UP PATTERNS IN LINEAR GRAPHING (gle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.

This lesson examines the "over and up" patterns of graphing pairs of numbers that satisfy an open sentence.

none;10-15 minutes;elementary mathematics students

PROBLEMS WITH LINEAR GRAPHS (grafexp2;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.

This is a lesson made up of seven different questions for the student to work, testing his knowledge of graphs and open sentences.

none;open-ended;elementary mathematics students

QUADRATIC EQUATIONS (quadratic;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.

This lesson presents some hard open sentences, but the student is told they are easy if he can find the two secrets.

none;10 minutes;elementary mathematics students

RULE FOR SUBSTITUTION (substitut;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.

This lesson explains the rule for substitution with several examples both true and false according to the rule. At the end, the student is given practice making up examples of proper and improper substitution.

none;10 minutes;elementary mathematics students

THE SHUTTLE PUZZLE (shuttle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
The object of this game is to interchange black pieces with orange pieces, with all pieces ending up on opposite sides. It will later be used to derive a quadratic equation.
none;open-ended;elementary mathmatics students

SOLVING OPEN SENTENCES (opensen;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
The student gets practice and help with solving open sentences in this lesson.
none;open-ended;elementary mathematics students

SOLVING OPEN SENTENCES (INTEGERS ONLY) (opensenw;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
The student gets practice and help with solving open sentences for integers in this lesson.
none;open-ended;elementary mathematics students

THE TOWER PUZZLE (tower;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is a game in which the object is to move a pile of discs from one peg to another. After practice, the student is asked to keep track of the number of moves, and the resulting table is used to illustrate a function. The student then guesses the rule. The game is the old "Tower of Hanoi" game.
none;none;elementary mathematics students

TRUE, FALSE AND OPEN SENTENCES (trufalop;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson illustrates the differences between true, false and open arithmetic statements. The student determines the validity of a series of statements and at the end of the lesson is asked to write an example of each kind of arithmetic statement.
none;10 minutes;elementary mathematics students

Arithmetic, Mental

MENTAL ARITHMETIC (wmg01; 1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
The program presents mental arithmetic problems involving addition, subtraction and multiplication. The problems are grouped according to difficulty. The student races against time. The solution time may be varied by the teacher and the computer then speeds up the allocated time as the participant becomes more proficient.
none;open-ended;elementary school children

MENTAL COUNTDOWN (zcountdow2;1976;unpublished)
Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson provides explicit instruction and practice in mental subtraction by counting backwards. It is a sequel to lesson "zcountdown".
none; three sessions, repeatable;elementary students

SUBTRACTING IN YOUR HEAD (zsubways;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson gives the student the opportunity to compare and practice the "countdown" and "facts" methods of mental arithmetic.
none;one 10 minute session, repeatable;elementary students

Arithmetic--Examinations, questions, etc.

SUBTRACTION CHECKUP; VERT. SUBTRACTION; SUBTRACTION POSTTEST (zsticksv;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Steinberg, Esther R; et al.
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson presents a checkup on the student to see if he can use the subtraction algorithm correctly following the instructional lessons. A student who does not meet criteria will receive more practice and then be tested again. A student who passes the posttest has completed the subtraction sequence.
none;one 10 minute segment, repeatable;elem. students

Arithmetic--Problems, exercises, etc.

CAN YOU TELL? (learnit;1979;unpublished)
Steinberg, Esther R
Comp.-based Educ. Res. Lab., University of Illinois
This lesson helps to teach primary students to solve problems.
touch panel;none;primary students

EQUIVALENT OPEN SENTENCES (solution;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
An open sentence and its solution set are displayed and the student is asked to write several open sentences that have the same solution set. This is a check-up lesson.
none;10 minutes;elementary mathematics students

PEEK! A PROBLEM SOLVING GAME (peekdig;1978;unpublished)
Steinberg, Esther R; Prouty, Richard M
Comp.-based Educ. Res. Lab., University of Illinois
This lesson is a reasoning type of game at several levels of difficulty. There are two related lessons that help: lesson "Can You Tell?" provides some insights about the task and lesson "What Do You Need to Know?" provides direct instruction on how to solve the PEEK problem.
touch panel;none;elementary students

RULE FOR SUBSTITUTION (substitut;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson explains the rule for substitution with several examples both true and false according to the rule. At the end, the student is given practice making up examples of proper and improper substitution.
none;10 minutes;elementary mathematics students

SAME OR NOT THE SAME? (peekdisc;1977;unpublished)
Steinberg, Esther R
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides primary level discrimination tasks by asking the student to touch the picture that is "not the same" out of three similar pictures shown. There are ten trials.
touch panel;none;primary students

TRUE, FALSE AND OPEN SENTENCES (trufalop;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson illustrates the differences between true, false and open arithmetic statements. The student determines the validity of a series of statements and at the end of the lesson is asked to write an example of each kind of arithmetic statement.
none;10 minutes;elementary mathematics students

WHAT DO YOU NEED TO KNOW? (tchpeek;1979;unpublished)
Steinberg, Esther R; Peltz, Stephen
Comp.-based Educ. Res. Lab., University of Illinois
The purpose of this lesson is to teach the student how to solve a problem by obtaining sufficient information.
touch panel;none;elementary students

Arm

BRACHIUM: CLINICAL APPLICATIONS AND DRILL (antebrl;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

In this quiz lesson, the student is asked to identify gross anatomical structures of the forearm. PLATO graphics are used as the source for questions. Bone fractures and a knife puncture are used in this practical anatomy approach.

none;15 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART VI - THE ARM (skelsys6;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the arm and forearm. The surfaces, borders and markings of the humerus, radius and ulna are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

Arm--Muscles

BRACHIUM: STRUCTURE, IDENTIFICATION, AND DRILL (brachl;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

In this quiz lesson, the student is asked to identify gross anatomical structures of the arm. PLATO graphics are used as the source for questions. The major content area includes identification of certain parameters of muscle function (origin, insertion, innervation and action) associated with the brachium.

none;15 minutes;first year medical students

Aromatic compounds

AROMATIC SYNTHESIS GAME (areneg;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This is an interterminal game for two persons. One player makes up a compound for another player to synthesize. If the player fails to make the compound, the namer of the compound has to synthesize it himself. The first person to prepare five compounds wins the game.

none;open-ended;college/university students of organic chemistry

ELECTROPHILIC AROMATIC SUBSTITUTION (arene;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This lesson deals with the introduction of substituents on a benzene ring. The mechanism of electrophilic substitution and its directive effects are presented.

none;58 minutes;college/university students

Aromatic compounds--Reactivity

MULTISTEP AROMATIC SYNTHESIS (opta;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson gives the student the opportunity to designate the steps in an electrophilic aromatic substitution reaction experiment. The student indicates the sequence of reactions to prepare benzene derivatives by supplying the reagent and the computer draws the structure of the product.
none;39 minutes;college/university students

Arrhythmia

THE TREATMENT OF CARDIAC ARRHYTHMIAS (kumc5;1975;unpublished)
Kansas University Medical Center; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois
This lesson discusses naturally occurring and digitalis-induced arrhythmias and the drugs used for treatment.
none;15 minutes;first year medical students

Arteries

CONGENITAL DEFECTS OF THE HEART AND GREAT VESSELS (pedcard;1977;unpublished)
Green, Michael; Sliwa, W. Gerard
School of Basic Medical Science, Univ. of Illinois
This lesson presents basic physiology and key clinical signs of major congenital defects of the heart and great vessels.
none;none;first year medical students

Articles (PLATO)

ARTICLES ABOUT THE PLATO SYSTEM (articles;1976;1977)
Lyman, Elisabeth R
Comp.-based Educ. Res. Lab., University of Illinois
This program is a bibliography of articles on the PLATO system and related subjects arranged for viewing alphabetically by author, by broad subject headings or chronologically by date of publication.
none;open-ended;everyone

Aspirin

CNS PHARM.: ASPIRIN-TYPE ANALGESICS & ANTI-INFLAM. AGENTS (kumc28;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the analgesic and anti-inflammatory effects of salicylates and other aspirin-type agents.
none;20 minutes;first year medical students

Assets, Fixed

FIXED ASSETS I (tab;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the recording of the acquisition of fixed assets and the major methods of depreciating them.
none;60 minutes;introductory accounting students

FIXED ASSETS II (tab2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson completes the review of fixed assets begun in "Fixed Assets I"; specifically to teach the various aspects involved in the disposal of an asset.
none;45 minutes;introductory accounting students

Astronomy--Charts, diagrams, etc.

CONSTELLATION STUDY (cdcstar;1979;1979)
Avner, Elaine
Comp.-based Educ. Res. Lab., U of I, Urbana
This lesson on constellations will plot 23 constellations and provide certain information for each, i.e., latitude, hour angle, azimuth and altitude, as well as the names of major stars. There is a drill available. The user may also plot any constellation by providing information as to the position of the stars.
none;open-ended;grade 9 and over interested in study of constellations

Atelectasis

ATELECTASIS AND RESPIRATORY DISTRESS SYNDROME OF THE NEWBORN (rds;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of atelectasis and respiratory distress syndrome of the newborn. An outline format is used, with review questions presented to assess the student's understanding of the material.
optional touch panel;none;first year medical students

Atomic mass

ATOMS AND ATOMIC MASSES (dalton;1973;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
An historical introduction to atomic theory is presented in this lesson.
none;31 minutes ;college/university students

Atomic warfare

TRIAD AND STRATEGIC DETERRENCE (triad;1979;unpublished)
Everett, Kenneth N; Prebeck, Steven R
Air Force Reserve Officers Training Corps / U of I
This lesson provides a general overview of the concept of strategic deterrence and the role that the triad of military nuclear forces serves in that concept.
microfiche, optional touch panel;35 minutes;cadets and general public

Atomic weapons

TRIAD AND STRATEGIC DETERRENCE (triad;1979;unpublished)
Everett, Kenneth N; Prebeck, Steven R
Air Force Reserve Officers Training Corps / U of I
This lesson provides a general overview of the concept of strategic deterrence and the role that the triad of military nuclear forces serves in that concept.
microfiche, optional touch panel;35 minutes;cadets and general public

Atoms

Atomic mass

ATOMS AND ATOMIC MASSES (dalton;1973;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
An historical introduction to atomic theory is presented in this lesson.
none;31 minutes ;college/university students

STRUCTURE OF ATOMS PART I: ATOMIC NUMBER AND MASS (atom1;1975;)
Chabay, Ruth
Chemistry Department, University of Illinois
The concepts of atomic number and atomic mass are important in understanding many chemical ideas. This lesson covers the basic composition of atoms (protons, neutrons, and eletrons), atomic number and atomic mass. The concept of gram-atomic weight (mole) is also introduced.
none;31 minutes;college/university students

Atomic number

STRUCTURE OF ATOMS PART I: ATOMIC NUMBER AND MASS (atom1;1975;)
Chabay, Ruth
Chemistry Department, University of Illinois
The concepts of atomic number and atomic mass are important in understanding many chemical ideas. This lesson covers the basic composition of atoms (protons, neutrons, and eletrons), atomic number and atomic mass. The concept of gram-atomic weight (mole) is also introduced.
none;31 minutes;college/university students

Electronic structure

ELECTRONIC STRUCTURE OF ATOMS: THE AUFBAU PRINCIPLE (atom3;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson is an introduction to the electronic structure of atoms. It is a prerequisite to the understanding of chemical reactions and the principles of chemical bonding. The construction of orbital occupation diagrams for elements other than rare earths is presented.
touch panel;35 minutes;college/university freshmen

ELECTRONIC STRUCTURE OF ATOMS: WRITING ELECTR. CONFIG. (atom4; 1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson teaches the student the process of writing out the electronic configuration of atoms by merely looking at the periodic table.
touch panel;38 minutes;college/university students

STRUCTURE OF ATOMS: VALENCE ELECTRONS (atom2;1975;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson teaches the student how to determine the number of valence electrons in an element by finding it in the periodic table and how the number of valence electrons determines what ions are commonly formed by an element.
touch panel;19 minutes;college/university students

Atrial septal defects

CONGENITAL DEFECTS OF THE HEART AND GREAT VESSELS (pedcard;1977;unpublished)
Green, Michael; Sliwa, W. Gerard
School of Basic Medical Science, Univ. of Illinois
This lesson presents basic physiology and key clinical signs of major congenital defects of the heart and great vessels.
none;none;first year medical students

Aufbau principle

ELECTRONIC STRUCTURE OF ATOMS: THE AUFBAU PRINCIPLE (atom3;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson is an introduction to the electronic structure of atoms. It is a prerequisite to the understanding of chemical reactions and the principles of chemical bonding. The construction of orbital occupation diagrams for elements other than rare earths is presented.
touch panel;35 minutes;college/university freshmen

Ausculation

PHYSICAL EXAMINATION OF THE RESPIRATORY SYSTEM (shp73;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson teaches the general organization of the respiratory system exam, the physiological principles upon which the examination is based and the interpretation of the findings in a respiratory system. The examination of the upper airway is not covered.
The student will need a stethoscope.;60 minutes;physicians' assistants

Autonomic drugs

AUTONOMIC PHARMACOLOGY: ARTERIAL BLOOD PRESSURE IN THE DOG
(kumc12;1975;unpublished)
Kansas University Medical Center; Hody, George; Stull, Richard; et al.
University of Kansas / University of Illinois

This lesson is a brief graphic quiz over various autonomic receptor agonists and antagonists, and their effects on certain cardiovascular parameters in the laboratory.

none;5 minutes;first year medical students

Autonomic nervous system

AUTONOMIC PHARMACOLOGY I: GENERAL INTRODUCTION AND REVIEW
(kumc3;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Felty, Michael; et al.
University of Kansas / University of Illinois

This lesson discusses general concepts of the autonomic nervous system including synthesis, degradation and effects of the various neurotransmitters. Questions to review the material are included.

none;15 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: ADRENERGIC AGENTS (autotut;1975;unpublished)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois

This lesson covers various noradrenergic synaptic processes, including norepinephrine synthesis, granular storage, terminal release and re-uptake, catabolism and receptor interaction. The sequence of questions/information is dependent on student performance. Clinically pertinent information is used to reinforce concepts.

none;30 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: ARTERIAL BLOOD PRESSURE IN THE DOG
(kumc12;1975;unpublished)
Kansas University Medical Center; Hody, George; Stull, Richard; et al.
University of Kansas / University of Illinois

This lesson is a brief graphic quiz over various autonomic receptor agonists and antagonists, and their effects on certain cardiovascular parameters in the laboratory.

none;5 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: REVIEW (kumc18;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois

This lesson is a quiz covering adrenergic and cholinergic related compounds, including stimulants and blocking agents. The questions are oriented toward basic mechanisms of these blocking agents, but draw clinical correlates as well.

none;15 minutes;first year medical students

AUTON. PHARMACOL. II: SYNTH. & BIOTRANSF. OF NEUROTRANS.
(kumc4;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson treats the synthesis and degradation of mediators of the autonomic nervous system, including the common synthetic pathway of epinephrine and acetylcholine.
none;10 minutes;first year medical students

AUTON. PHARMACOL.: ADRENERGIC MECHANISMS AND USES (kumc13;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson treats the effects of adrenergic stimulating and blocking agents. The concept of alpha and beta adrenergic receptors is included.
none;10 minutes;first year medical students

AUTON. PHARMACOL.: CHOLINERGIC MECHANISMS & USES (kumc9;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the effects of stimulation and blockade of muscarinic and nicotinic receptors.
none;25 minutes;first year medical students

GLAUCOMA (bazzoon;1978;unpublished)
Farney, Thomas L; Lee, Tom Jer-Fu
Southern Illinois University School of Medicine
This lesson consists of eleven sections which allow the student to learn about the anatomy and physiology of glaucoma, selectively review aspects of the disease process, and assess his/her knowledge of relevant autonomic pharmacology.
none;open-ended;first year medical students

LAB. EXPT. IN THE PHARMACOLOGY OF THE AUTO. NERVOUS SYSTEM
(labsim;1975;1977)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
The student is shown the effects of certain autonomic agents on several aspects of the cardiovascular system in the "anesthetized laboratory dog".

After making the observations, an opportunity is given to apply the information by identifying a unknown compound.
none;25 minutes;medical students

NEUROHUMOR METABOLISM: METAB. PATHS OF PRIMARY NEUROMEDIATOR (nhumor;1975;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois
The lesson provides information regarding the synthesis and degradation of certain primary chemical mediators of the autonomic and central nervous systems, including dopamine, norepinephrine, epinephrine, serotonin, and acetylcholine. A drill and practice section over various structures and pathways is included.
none;25 minutes;first year medical students

Aviation
see Aeronautics

Backache

PROBLEM SOLVING IN CLINICAL MEDICINE: BACKACHE (feinz7;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 31-year-old moderately obese man who comes in after the sudden onset of backache two days ago. The user is a student physician working for an ambulatory care facility who has been assigned to this man. Choices are made from options provided and each selection is discussed.
none;none;medical students

Bacteria, Pathogenic

BACTERIAL TERM.:GROWTH, GENETICS, PATHOGENICITY (bacterm; 1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents and reviews basic terminology associated with bacterial growth cycle, bacterial genetics (e.g. transformation, transduction, conjugation), and pathogenicity (e.g. virulence, toxins). Student performance within the module is presented upon completion.
none;20 minutes;first year medical students

MICROLOGUE II: GRAM POSITIVE COCCI, PART I (microlog2a;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson discusses the group of bacteria classified as gram positive cocci. The study includes patient dialogue and the pathophysiology and etiology of upper respiratory infections. A discussion of stains used in microbiology is also included.
none;15 minutes;first year medical students

MICROLOGUE II: GRAM POSITIVE COCCI, PART II (micrologue2b;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson continues the discussion of the gram positive cocci begun in Part I. The patient dialogue is continued with specific consideration of staphylococcus, streptococcus and streptococcus pneumoniae. Characteristics and morphology of these organisms are studied as well as criteria for identification.
microfiche;20 minutes;first year medical students

MICROLOGUE I: GRAM NEGATIVE RODS (micrologia;1977;unpublished)
Gabridge, Michael G; Ngo, P P
School of Basic Medical Sciences, Univ. of Illinois
This lesson discusses a group of bacteria classified as gram negative rods. The study includes patient dialogue and specimen selection and the pathophysiology and etiology of the organisms are considered. A discussion of selective media and diagnostic tests, including KIA reactions, follows a logic flow for identification of these organisms.
microfiche;none;first year medical students

PLANT PATHOLOGY: AN INTRO. TO DISEASE AND KOCH'S POSTULATES (pathos;1974;unpublished)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
In this lesson the student will learn to formulate a procedure for identifying the pathogen causing a disease and to calculate the dilution factor for making soil cultures.
microfiche;40 minutes;college/university students

Bacterial genetics

BACTERIAL TERM.:GROWTH, GENETICS, PATHOGENICITY (bacterm; 1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents and reviews basic terminology associated with bacterial growth cycle, bacterial genetics (e.g. transformation, transduction, conjugation), and pathogenicity (e.g. virulence, toxins). Student performance within the module is presented upon completion.
none;20 minutes;first year medical students

Bacterial growth

BACTERIAL TERM.:GROWTH, GENETICS, PATHOGENICITY (bacterm; 1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents and reviews basic terminology associated with bacterial growth cycle, bacterial genetics (e.g. transformation, transduction, conjugation), and pathogenicity (e.g. virulence, toxins). Student performance within the module is presented upon completion.
none;20 minutes;first year medical students

PLANT PATHOLOGY: AN INTRO. TO DISEASE AND KOCH'S POSTULATES
(pathos;1974;unpublished)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
In this lesson the student will learn to formulate a procedure for identifying the pathogen causing a disease and to calculate the dilution factor for making soil cultures.
microfiche;40 minutes;college/university students

POPULATIONS LABORATORY USING E. COLI (pop;1974;1980)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson describes how populations grow and identifies factors affecting the growth of bacterial populations.
none;15-25 minutes;college/university students

Bacteria--Morphology

BACTERIAL TERMINOLOGY REVIEW: CELL MORPHOLOGY (microterm;1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
The lesson reviews basic terminology associated with bacterial cell morphology. In a linear, interogative format, terms associated with internal bacterial cell structures, the bacterial cell envelope, bacterial cell appendages, and spore formation are presented or reviewed.
none;35 minutes;first year medical students

BASIC VIROLOGY I: STRUCTURAL CHARACTERISTICS OF THE VIRION
(kvirus;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Scieneces, Univ. of Illinois
The lesson presents basic information concerning viral morphology, e.g. capsids, capsomeres, nucleocapsids, and information concerning the various symmetries exhibited by virus particles, e.g. icosahedral, helical, complex, and 5:3:3: rotational symmetry.
slide selector, microfiche;20 minutes;first year medical students

MICROLOGUE II: GRAM POSITIVE COCCI, PART II (microlog2b;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson continues the discussion of the gram positive cocci begun in Part I. The patient dialogue is continued with specific consideration of staphylococcus, streptococcus and streptococcus pneumoniae. Characteristics and morphology of these organisms are studied as well as criteria for identification.
microfiche;20 minutes;first year medical students

Bacteriology, Medical

BACTERIAL TERMINOLOGY REVIEW: CELL MORPHOLOGY (microterm;1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
The lesson reviews basic terminology associated with bacterial cell morphology. In a linear, interogative format, terms associated with internal bacterial cell structures, the bacterial cell envelope, bacterial cell appendages, and spore formation are presented or reviewed.
none;35 minutes;first year medical students

BACTERIAL TERM.:GROWTH, GENETICS, PATHOGENICITY (bacterm; 1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents and reviews basic terminology associated with bacterial growth cycle, bacterial genetics (e.g. transformation, transduction, conjugation), and pathogenicity (e.g. virulence, toxins). Student performance within the module is presented upon completion.
none;20 minutes;first year medical students

MICROBIAL TOXINS III: CLINICAL CASES (microtox3;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
Three clinical toxemias are presented for diagnosis by the student. Such aspects as symptoms, pathogenesis, and treatment are emphasized.
slide selector, microfiche;15 minutes;first year medical students

MICROBIAL TOXINS II: BACTERIAL TOXINS (microtox2;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
The lesson is the second in the series on pathogenicity through toxin production. This lesson reviews information on bacterial toxins concerning general properties, toxicity, and immunology.
slide selector, microfiche;20 minutes;first year medical students

MICROBIAL TOXINS I: ALGAL AND FUNGAL SPECIES (microtox;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
The lesson is one of a series on pathogenicity through toxin production. Basic and clinical information concerning algal and fungal toxins is presented. The purpose of the lesson is to make the student aware of such toxins, which are often ignored in favor of bacterial toxins.
slide selector, microfiche;10 minutes;first year medical students

MICROLOGUE II: GRAM POSITIVE COCCI, PART I (micrology2a;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson discusses the group of bacteria classified as gram positive cocci. The study includes patient dialogue and the pathophysiology and etiology of upper respiratory infections. A discussion of stains used in microbiology is also included.
none;15 minutes;first year medical students

MICROLOGUE II: GRAM POSITIVE COCCI, PART II (micrology2b;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson continues the discussion of the gram positive cocci begun in Part I. The patient dialogue is continued with specific consideration of staphylococcus, streptococcus and streptococcus pneumoniae. Characteristics and morphology of these organisms are studied as well as criteria for identification.
microfiche;20 minutes;first year medical students

MICROLOGUE I: GRAM NEGATIVE RODS (micrologla;1977;unpublished)
Gabridge, Michael G; Ngo, P P
School of Basic Medical Sciences, Univ. of Illinois
This lesson discusses a group of bacteria classified as gram negative rods. The study includes patient dialogue and specimen selection and the pathophysiology and etiology of the organisms are considered. A discussion of selective media and diagnostic tests, including KIA reactions, follows a logic flow for identification of these organisms.
microfiche;none;first year medical students

Bacteriophage

BASIC VIROLOGY IIA: VIRAL MULT. (ADSORP. THROUGH ECLIPSE) (kvirus2;1975;unpublished)
Wagner, Kenneth; Cohen, Paul; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
The lesson is a combination of linear and quiz formats. Information concerning the viral multiplication phases, adsorpton, penetration, and eclipse of both animal viruses and bacteriphages are accessed via a quiz on a textual and diagrammatic instructional section. The student may be branched to instructional material based upon quiz results.
none;20 minutes;first year medical students

BASIC VIROLOGY IIB: VIRAL MULT. (REPLICATION THRU RELEASE)
(kvirus3;1975;unpublished)
Wagner, Kenneth; Cohen, Paul; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
The viral multiplication phases, replication, maturation and release, of both animal viruses and bacteriophages are presented, either in a quiz over each phase, or in a textual and diagrammatic instructional section. The process of lysogeny is discussed in the release phase. After the quiz, the student may be urged to study instructional material.
none;20 minutes;first year medical students

Balantidium coli

MEDICAL PARASITOLOGY VI: TISSUE AND LUMEN-DWELLING CILIATES
(cilia;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
Incorporated into this lesson in a linear interrogative format is the information on general ciliate characteristics and on thermophology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment of the pathogen, Balantidium coli. A diagnostic quiz over the material is also available for those interested in reviewing.
none;5 minutes;first year medical students

Bar examinations

MULTISTATE BAR EXAMINATION (bar1;1972, 1978;unpublished)
Maggs, Peter B
College of Law, University of Illinois, Urbana, Ill.
The purpose of this lesson is to allow law students to practice taking the bar examination using questions from previous tests. It is constructed so that the students may compare their performance with others who have used the lesson. While the sample questions illustrate some types of questions that will be used, not all material is represented.
none;90 minutes/50 question section;law students

Barbiturates

CNS PHARMACOLOGY: SEDATIVES AND HYPNOTICS (kumc19;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the general chemistry and pharmacology of sedative-hypnotics. Those treated are primarily barbiturates, certain anithistamines, chloral hydrate, ethchlorvynol, glutethamide, methaqualone and other clinically pertinent sedative-hypnotic agents.
none;10 minutes;first year medical students

Basal metabolism

ENERGY (nutr6;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
The sixth lesson in the Nutrition Series discusses the measurement and requirements of energy in relation to the body.
none;25-30 minutes;nutrition students

Bases (Chemistry)

ACID BASE REACTIONS: PRACTICE PROBLEMS (abprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson consists of a series of practice problems on acid-base reactions.
touch panel;13 minutes;college/ university freshmen

ACID-BASE TITRATION (phcurves;1972;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson presents the calculation of H^+ and pH, the titration of weak acids and the titration of diprotic weak acids.
none;17 minutes;students of general chemistry

ACID-BASE TITRATIONS (titrate2;1976;1977)
Smith, Stanley
Department of Chemistry, Univ. of Illinois
The lesson is comprised of a simulated acid-base titration experiment in which the student measures the concentration of a solution of NaOH by titration of a weighed sample of potassium acid phthalate. The solution of NaOH is then used to determine the molecular weight of an unknown acid.
none;20 minutes;college/university students

AMINO ACIDS, PEPTIDES, PROTEINS, AS ACIDS AND BASES (mph3;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the acid-base character of amino acids, peptides and proteins, and examines the concepts of pH, H^+, HA, K′, pK′ and buffers at the biochemical level.
none;15 minutes;first year medical students

BUFFER PROBLEMS (mph2;1975;unpublished)
Agee, C. Coe; Rende, R J
School of Basic Medical Sciences, Univ. of Illinois
This lesson explains the concept of buffers as it applies to biological systems. It presents the methods for calculating and preparing buffers by titration and by molecular weight. There is a drill in the form of typical buffer problems with randomly generated values for conjugate acid, conjugate base, and pH, for the student to solve.
none;15 minutes;first year medical students

CHEMICAL NOMENCLATURE - NAMING ACIDS AND BASES (chemnom3;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
This is the second lesson in the series of lessons on Chemical Nomenclature. This lesson involves naming acids and bases.
none;none;college/university students

CLINICAL AND PHYSIOLOGICAL ACID-BASE PROBLEMS (mph4;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
In this lesson the student encounters common clinical, laboratory and physiological problems, the solutions of which require an understanding of the relationships among pH, H^+, pK′, conjugate acid (HA), and conjugate base (A^-).
none;35 minutes;first year medical students

INORGANIC NOMENCLATURE (chemnom;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
The lesson gives instruction in how to name some chemical compounds (ions, salts, acids, and multivalent cations). Practice drills are included. All the material is in one lesson. Similar material by the same author is divided into three lessons which are described separately.
none;39 minutes;college/university students of beginning chemistry

INORGANIC NOMENCLATURE DRILLS (compound;1973;1977)
Grandey, Robert C; Adams, Edward
Computer-based Educ. Res. Lab., University of Illinois
The lesson allows the student to do drills on names and formulas of salts, acids and bases (binary non-metallic compounds). The drills may be designed by instructors, may be standard drills, or may be made up by the student.
none;none;college/university chemistry students

INTRODUCTION TO TITRATIONS (ititm2;1977;1978)
Smith S - Chabay R
Chemistry Department, Univ. of Ill., Urbana, Ill.
The lesson introduces the students to the equations, calulations, and experimental techniques involved in performing titration experiments.
microfiche;52 minutes;college/university students

NUCLEIC ACIDS I: STRUCTURES AND BIOCHEMICAL CHARACTERISTICS (mnuc;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents the nomenclature, properties, structures and uses of the common "bases," nucleosides and nucleotides. Some purine and pyrimidine derivatives with therapeutic uses are also covered. This material is divided into four instructional sections each followed by a set of informative questions.
none;30 minutes;first year medical students

PH AND ACID-BASE RELATIONSHIPS (mph;1975;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the concepts of acid and base, pH, and hydrogen ion concentration and derives the Henderson-Hasselbalch equation.
none;30 minutes;first year medical students

BASIC (Computer programming language)

COMPACT BASIC COMPILER SYSTEM (basicx;1976,78;1978)
White, Lawrence A; Schreiner, Axel T
Dept. of Computer Science, University of Illinois
This PLATO utility lesson is an editor, compiler and executor for brief BASIC language programs and supports most BASIC statements.
none;open-ended;computer programming-oriented persons; students of BASIC

Behavior (Psychology)

MOTIVATIONAL CONTROL SYSTEM MODEL (motcs;1974;1978)
Grohne, Thomas; Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
The object of this lesson is to explore the principles of a motivational control system. A very typical system, the control of hunger, is examined.
none;none;university/college students

Bibliographies

Articles (PLATO)

ARTICLES ABOUT THE PLATO SYSTEM (articles;1976;1977)
Lyman, Elisabeth R
Comp.-based Educ. Res. Lab., University of Illinois
This program is a bibliography of articles on the PLATO system and related subjects arranged for viewing alphabetically by author, by broad subject headings or chronologically by date of publication.
none;open-ended;everyone

Bibliographies--Methodology

BIBLIOGRAPHY (bib;1974,77;unpubl.)
Retor, Robert
Kennedy-King College, Chicago, Illinois

This lesson familiarizes and gives the student practice with bibliographic form. Six parts include basic bibliographic form plus a sample of annotated bibliography and some suggestions regarding some basic library reference work.

none;60 minutes;Students in any course requiring term paper

Bioengineering

ULTRASONIC BLOOD FLOW MEASUREMENT (bioinstl;1978;1979)
Beck, Howard W; Olson, Walter H
Dept. Elec. Engineering, U of I, Urbana, Ill.

This lesson simulates the use of ultrasound for measuring the velocity of blood flow through the vessels.

none;none;college/university students

Biogeochemical cycles

BIOGEOCHEMICAL CYCLES (biogeo;1977;1978)
Baillie, Robert; Hyatt, Gary
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

This lesson dicusses the four most important biogeochemical cycles on earth. As the student goes through the lesson he is told to look for two things: 1) how each element gets back to where it started and 2) what would happen if part of the cycle were destroyed.

none;20 minutes;college/university students

Biogeochemistry

BIOGEOCHEMICAL CYCLES (biogeo;1977;1978)
Baillie, Robert; Hyatt, Gary
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

This lesson dicusses the four most important biogeochemical cycles on earth. As the student goes through the lesson he is told to look for two things: 1) how each element gets back to where it started and 2) what would happen if part of the cycle were destroyed.

none;20 minutes;college/university students

Biological chemistry

AMINO ACIDS, PART II: PEPTIDE SEQUENCE ANALYSIS (mseq;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois

This lesson is a laboratory simulation which allows the student to sequence short peptides of graduated difficulty. The lesson contains an instructional section describing some of the techniques used for peptide sequencing and a simple example to demonstrate the logic used in peptide sequencing.

none;15 minutes;first year medical students

AMINO ACIDS, PEPTIDES, PROTEINS, AS ACIDS AND BASES (mph3;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the acid-base character of amino acids, peptides and proteins, and examines the concepts of pH, H^+, HA, K′, pK′ and buffers at the biochemical level.
none;15 minutes;first year medical students

AMINO ACIDS: STRUCT. AND BIOCHEM. CHARACTER. (mamino;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson has instructional, reference and drill sections which cover the structures, nomenclature, chemistry (e.g., pK, pI, solubility) and biochemistry (e.g., catabolic fate) of the 20 amino acids commonly found in proteins.
none;15 minutes;first year medical students

ENZYME KINETICS: ALLOSTERIC CONTROL (menz4;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson explains the structure and function of allosteric enzymes in general, and the structure and function of intercellular process, in particular.
none;25 minutes;first year medical students

ENZYME KINETICS: INTERACTIVE GRAPHICS (menz2;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
In this lesson the quantitative nature of enzyme catalyzed reactions is displayed graphically. The various parameters may be altered (i.e., substrate concentration, inhibitor concentration, Km, Vmax) and the effects on the kinetics of the reaction can be observed. Problems concerning both simple and inhibitor kinetics are presented to the student.
none;25 minutes;first year medical students

ENZYME KINETICS: INTRODUCTION (menz3;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Health Sciences, Univ. of Illinois
This lesson reviews the derivation of the Michaelis-Menton equation. It defines and explains the relationships among substrate concentration, reaction, velocity, Km and Kmax.
none;25 minutes;first year medical students

INTRODUCTION TO SERUM ENZYMES (menz6;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences. Univ. of Illinois
The lesson introduces the student to certain clinical aspects of serum enzyme levels through matching serum enzyme patterns with selected normal and pathological conditions, or listing tissues and organs which may release significant amounts of particular enzyme(s) following trauma or stress.
none;15 minutes;first year medical students

SANGER OLIGONUCLEOTIDE MAPPING (saml;1976;1978)
Kaplan, Samuel
Department of Microbiology, University of Illinois
The lesson teaches the student the techniques of Sanger oligonucleotide mapping through a simulated laboratory exercise. The lesson is not intended to substitute for a wet laboratory experience. The exercise is self-paced."saml" takes up digestion of RNA chains, "sam2" lforesis oligos, "sam3" questions on digestion, "sam4" chain generation.
none;2 1/2-3 hours total;college/university students

SCATCHARD ANALYSIS (scatch;1977;unpublished)
Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore
This lesson gives the average medical reader or student sufficient understanding of the basics of Scatchard analysis to comprehend scientific investigation based on this type of receptor analysis. It draws an analogy between Scatchard Analysis and the similar, but more familiar Michaelis-Menten Kinetics.
none;10 minutes;first year medical students

VITAMINS II: THE WATER SOLUBLE VITAMINS (mvit2;1975;unpublished)
Agee, C. Coe; Jones, Peter D
School of Basic Medical Sciences, Univ. of Illinois
This lesson, one of a series of three, explains and summarizes various nutritional, biochemical and pharmacological aspects of the water soluble vitamins B_1, B_2, B_6, and B_{12}.
none;15 minutes:first year medical students

Biological chemistry--Examinations, questions, etc.

AMINO ACIDS, PART II: PEPTIDE SEQUENCE ANALYSIS (mseq;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson is a laboratory simulation which allows the student to sequence short peptides of graduated difficulty. The lesson contains an instructional section describing some of the techniques used for peptide sequencing and a simple example to demonstrate the logic used in peptide sequencing.
none;15 minutes;first year medical students

BASIC THERMODYNAMICS QUIZ (mthermo2;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson contains diagnostic and problem solving sections on thermodynamics. Three diagnostic drills cover the basic concepts of free energy, entropy and electromotive potential. The problem solving section combines practical applications with sufficient help to lead the student to the correct answers.
none;45 minutes;first year medical students

BUFFER PROBLEMS (mph2;1975;unpublished)
Agee, C. Coe; Rende, R J
School of Basic Medical Sciences, Univ. of Illinois
This lesson explains the concept of buffers as it applies to biological systems. It presents the methods for calculating and preparing buffers by titration and by molecular weight. There is a drill in the form of typical buffer problems with randomly generated values for conjugate acid, conjugate base, and pH, for the student to solve.
none;15 minutes;first year medical students

CARBOHYDRATE METABOLISM III: GALACTOSE, FRUCTOSE, MANNOSE (mcatsug;1976;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews glycolysis/gluconeogenesis and then covers the catabolism of the sugars, galactose, fructose, mannose, and of glycerol. For each compound there is a short textual discussion, question/answer section and a drill over names of enzymes and metabolites.
none;45 minutes;first year medical students

CARBOHYDRATE METABOLISM II: GLUCONEOGENESIS (mgluneo;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews glycolysis, compares and contrasts glycolysis and gluconeogenesis, describes the reactions unique to gluconeogenesis, drills the names of metabolites and enzymes, and provides a quiz over all.
none;55 minutes;first year medical students

CARBOHYDRATE METABOLISM IV: CONTROL OF CARBOHYD. METABOLISM (mcarbcon;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson deals with the control processes of the glycolytic and gluconeogenic pathways. It has two sections of questions, the first covering the ways in which various allosteric modifiers affect these pathways, and the second covering the means by which the enzymes of these pathways are controlled.
optional touch panel;none;first year medical students

CARBOHYDRATE METABOLISM I: GLYCOLYSIS (mglyco;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents the glycolytic pathway from glucose through pyruvate, with a drill at the end.
none;20 minutes;first year medical students

CARBOHYDRATES III: CARBOHYDRATE IDENTIFICATION AND STRUCTURE (mcarbo;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides drill and practice in the identification of common carbohydrates and carbohydrate derivatives.
none;25 minutes;first year medical students

CARBOHYDRATES IV: IDENTIFICATION OF CARBOHYDRATES (mcarbqz;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson is a competitive exercise in which students are asked to identify structures of carbohydrates and their derivatives, picked randomly. Speed and accuracy are emphasized and students compete for the lowest score (i.e., the lowest time with the fewest mistakes).
none;10 minutes;first year medical students.

CLINICAL AND PHYSIOLOGICAL ACID-BASE PROBLEMS (mph4;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
In this lesson the student encounters common clinical, laboratory and physiological problems, the solutions of which require an understanding of the relationships among pH, H^+, pK′, conjugate acid (HA), and conjugate base (A^-).
none;35 minutes;first year medical students

HUMAN HEMOGLOBIN INTERACTION WITH POLYPHOSPHATES (hemodpg;1977;unpublished)
McDiarmid, Melissa A; Bucci, Enrico; Ryker, Martha
School of Medicine, Univ. of Maryland, Baltimore
This lesson deals with the stereochemistry of the binding of 2,3DPG (2,3-diphosphoglycerate) to human hemoglobin and with the simulations of oxygen transport in the presence of varying oxygen pressures at the lungs and varying amounts of 2,3DPG inside the red cells.
none;none;first year medical students

IDENTIFICATION OF LIPID AND LIPID-LIKE COMPOUNDS (mlipqz;1976;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson is a multiple choice proficiency drill covering the structures and nomenclature of selected lipids and lipid-like compounds.
none;10 minutes;first year medical students

INTERMEDIARY METABOLISM: TCA CYCLE (mtca2;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson describes and summarizes many important characteristics of the Tricarboxylic Acid (Krebs) Cycle. The cycle is divided into three sections, each of which consists of a textual explanation, a quiz over the material and a drill covering the names of metabolites and enzymes.
none;40 minutes;first year medical students

NUCLEIC ACID SEQUENCES (mnuc2;1977;unpublished)
Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents the nomenclature, properties and structures of nucleotide sequences and the reactions by which they can be degraded. The lesson is divided into instructional sections each followed by questions on the objectives covered in that section.
none;none;first year medical students

NUCLEIC ACIDS II: IDENTIFICATION OF NUCLEIC ACIDS (mnucqz;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson is a multiple choice proficiency drill covering the structure and nomenclature of nucleic acids, nucleotide sequences and nucleic acid derivatives.
none;15 minutes;first year medical students

NUCLEIC ACIDS I: STRUCTURES AND BIOCHEMICAL CHARACTERISTICS (mnuc;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents the nomenclature, properties, structures and uses of the common "bases," nucleosides and nucleotides. Some purine and pyrimidine derivatives with therapeutic uses are also covered. This material is divided into four instructional sections each followed by a set of informative questions.
none;30 minutes;first year medical students

OXYGEN TRANSPORT BY HEMOGLOBIN (oth;1977;unpublished)
Bucci, Enrico; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore
This simulation program illustrates the overall affinity of hemoglobin for oxygen, the heme-heme interaction, the oxygen saturation curve and the Hill equation. The user can manipulate the parameters and see how the changes affect the oxygen saturation curve and amount of oxygen delivered to the tissues.
none;none;first year medical students

PH AND ACID-BASE RELATIONSHIPS (mph;1975;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the concepts of acid and base, pH, and hydrogen ion concentration and derives the Henderson-Hasselbalch equation.
none;30 minutes;first year medical students

PURINE METABOLISM (goutl;1977;unpublished)
Ahasic, Thomas; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides a discussion of purine synthesis and catabolism with particular emphasis on processes which are of immediate concern for the understanding of various disease states and the mechanism of effect of certain pharmacologic agents.
none;30 minutes;first year medical students

PYRIMIDINE METABOLISM (gout2;1977;unpublished)
Ahasic, Thomas; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides a discussion of the metabolism and catabolism of pyrimidine nucleotides. Special emphasis is given to those processes which are of immediate concern for the understanding of certain disease states.
none;30 minutes;first year medical students

THE STRUCTURE OF HEMOGLOBIN AND MYOGLOBIN (hemocopy;1976;unpublished)
Bucci, Enrico; Bender, Jeffrey; Faith, Gregory; et al.
School of Medicine, Univ. of Maryland, Baltimore
This lesson presents the basic structural components of the oxygen-carrying protein in man. The quaternary structure of hemoglobin and the most important conformational changes that are produced by oxygenation are represented graphically.
none;15 minutes;first year medical students

VITAMINS III: THE WATER SOLUBLE VITAMINS (mvit3;1975;unpublished)
Agee, C. Coe; Jones, Peter D
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents material on the nutritional, biochemical and pharmacological characteristics of the water soluble vitamins Niacin, Pantothenic acid, Folic acid, Ascorbic acid and Biotin. For each vitamin, there is a short quiz.
none;5 minutes;first year medical students

VITAMINS I: COMPREHENSIVE QUIZ (mvitl;1975;unpublished)
Agee, C. Coe; Jones, Peter D
School of Basic Medical Sciences, Univ. of Illinois

This quiz is one of a series of three lessons which presents certain nutritional, biochemical and pharmacological aspects of nine vitamins. The lesson covers the structures, nomenclature, biochemistry, nutrition and pharmacology of the water soluble vitamins.

none;15 minutes;first year medical students

Biological transport

Diffusion

DIFFUSION AND OSMOSIS (osmosis;1976;1977)
Boggs, Stephen H
CERL, University of Illinois

The lesson is an introduction to the ideas of diffusion and osmosis. After the subject of diffusion is treated, there are sections on molecular motion, membranes (with a demonstration of osmosis), and a U-tube and blood cell experiment.

none;35 minutes;college/university students

DIFFUSION OF GASES (shp68;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas

This lesson discusses the diffusion of gases by dissolution in a liquid, specifically the dissolution of respiratory gases in the blood and subsequent diffusion in the lungs.

none;2 hours;physicians' assistants

Osmosis

DIFFUSION AND OSMOSIS (osmosis;1976;1977)
Boggs, Stephen H
CERL, University of Illinois

The lesson is an introduction to the ideas of diffusion and osmosis. After the subject of diffusion is treated, there are sections on molecular motion, membranes (with a demonstration of osmosis), and a U-tube and blood cell experiment.

none;35 minutes;college/university students

GAS TRANSPORT IN BLOOD (shp89;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas

This lesson focuses on the normal transport of respiratory gases in the blood.

none;2 hours;physicians' assistants

OXYGEN TRANSPORT BY HEMOGLOBIN (oth;1977;unpublished)
Bucci, Enrico; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore

This simulation program illustrates the overall affinity of hemoglobin for oxygen, the heme-heme interaction, the oxygen saturation curve and the Hill equation. The user can manipulate the parameters and see how the changes affect the oxygen saturation curve and amount of oxygen delivered to the tissues.

none;none;first year medical students

Biology
see also Anatomy; Biological chemistry; Botany; Genetics;

Biology
see also Heredity; Microbiology; Physiology; Zoology

Biology
Animals, Habits and behavior of
THE PHYSIOLOGICAL BASIS OF LEARNING (plearn;1976;1977)
Boggs, Stephen H
CERL, University of Illinois

The lesson explains the physiological basis of learning. It assumes the student is familiar with neuron structure and function.

none;30 minutes;college/university students

Biological transport
DIFFUSION AND OSMOSIS (osmosis;1976;1977)
Boggs, Stephen H
CERL, University of Illinois

The lesson is an introduction to the ideas of diffusion and osmosis. After the subject of diffusion is treated, there are sections on molecular motion, membranes (with a demonstration of osmosis), and a U-tube and blood cell experiment.

none;35 minutes;college/university students

DIFFUSION OF GASES (shp68;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas

This lesson discusses the diffusion of gases by dissolution in a liquid, specifically the dissolution of respiratory gases in the blood and subsequent diffusion in the lungs.

none;2 hours;physicians' assistants

Cells

CELL GROWTH (coli;1976;1978)
Francis, Rosanne; Kaplan, Samuel
Dept. of Microbiology, Sch. of Life Sciences, U of I

This is the first of a series of lessons on cell growth written for biologists. The lessons include instruction in the mathematics involved in graphing exponential cell growth data as well as presenting the various phases of cell growth. The lessons are in the series: coli, coli2 - coli7.

none;3 hours for series;college/university students

Biology--Periodicity

BIOCYCLES (biocycles;1976;1979)
Kraatz, James M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

Given biographical data, this lesson will plot the natural biorhythmic cycles of the mind, body and spirit.

none;open-ended;general

Biomechanics

BIOMECHANICS OF RUNNING (pe10;1974;unpublished)
Reece, Robert M; Dillman, Charles J
Physical Education Department, U of I, Urbana, Ill.

This lesson teaches the user to manipulate various parameters which determine the speed at which a sprinter is able to run the 100 meter dash. Background material and definitions are provided.

none;1-2 hours;persons interested in the study of biomechanics

PROJECTILE MOTION IN SPORTS SKILLS (pe1;1974;unpublished)
Reece, Robert M; Dillman, Charles J
Physical Education Department, U of I, Urbana, Ill.

The purpose of this lesson is to illustrate how the manipulation of selected biomechanical factors of human performance can influence the outcome of various projection activities in sport.

none;60 minutes;persons interested in the study of biomechanics

Biosynthesis

BIOSYNTHESIS OF PROTEIN (shp8;1974;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas

This lesson will describe the main sequence of events leading to the synthesis of nucleic acids and protein in the cell, identify the roles played by the nucleic acids in the biosynthesis of protein, and predict the effect of point mutations on protein primary structure.

none;60 minutes;physicians' assistants

Birth control

CONTRACEPTIVE COVERAGE MODEL (emaps;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using contraceptive coverage variables can be graphed. A list of available regions is provided and the variables can be changed for each projection.
none;open-ended;persons interested in populations

DRUGS: ORAL CONTRACEPTIVES (kumc44;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson discusses oral contraception through hormone inhibition of the normal menstrual cycle. Some of the adversities are also mentioned.
none;15 minutes;first year medical students

Birth defects

see Deformities

Bladder

MYSTERIOUS SPINAL CD. CASE III:NEUROGENIC BLAD. (curtiss14;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the bladder emptying reflex, and differentiation between the flaccid and spastic neurogenic bladder.
none;5-10 minutes;students of occupational therapy, medical students

Blood flow--Measurement

ULTRASONIC BLOOD FLOW MEASUREMENT (bioinstl;1978;1979)
Beck, Howard W; Olson, Walter H
Dept. Elec. Engineering, U of I, Urbana, Ill.
This lesson simulates the use of ultrasound for measuring the velocity of blood flow through the vessels.
none;none;college/university students

Blood, Gases in

GAS TRANSPORT IN BLOOD (shp89;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas
This lesson focuses on the normal transport of respiratory gases in the blood.
none;2 hours;physicians' assistants

INTRODUCTION TO RESPIRATION AND VENTILATION (shp65;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson defines the processes of respiration and ventilation, illustrates the principles that explain how ventilation occurs, provides an introduction to the anatomical components of the respiratory system, and introduces the topographical anatomy of the lungs.
none;60-90 minutes;physicians' assistants

PULMONARY FUNCTION TESTING (shp93;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson discusses specific tests which assess a patient's pulmonary function. The student is given a chance to practice interpreting test results for some hypothetical patients.
none;90 minutes;physicians' assistants

Blood groups

BLOOD GROUP SYSTEMS OTHER THAN ABO AND Rh (hemcarle1;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson provides clinically significant information on some of the more important blood group systems other than the ABO and Rh systems.
none;none;laboratory technology students, medical students

LABORATORY TESTS (shp14;1974;unpublished)
Lacoe, Robert E; Kimball, R M
Sheppard Air Force Base, Texas
This lesson discusses the Rh-hr system and stresses the importance of this system in the practice of medicine. The student then uses this information in a simulated test.
none;7.5 hours;physicians' assistants

Blood plasma

TRANSFUSION THERAPY II:PLATELETS AND PLASMA COMP. (bend2;1978;unpublished)
Dawson, R. Ben; Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore
This lesson is second in the series of transfusion therapy lessons. It deals with platelets and plasma clotting factors.
none;20-30 minutes;medical students

Blood pressure

AUTONOMIC PHARMACOLOGY: ARTERIAL BLOOD PRESSURE IN THE DOG (kumc12;1975;unpublished)
Kansas University Medical Center; Hody, George; Stull, Richard; et al.
University of Kansas / University of Illinois
This lesson is a brief graphic quiz over various autonomic receptor agonists and antagonists, and their effects on certain cardiovascular parameters in the laboratory.
none;5 minutes;first year medical students

Blood pressure--Measurement

DIRECT HYDRAULICALLY COUPLED BLOOD PR. MEAS. (bioinst3;1978;1980)
Olson, Walter H; Clapman, Ronald M; Nelson, Mark W; et al.
Dept. of Electrical Engineering, U of I, Urbana

The purpose of this lesson is to provide an introduction to the principles and practices of the direct method of measuring blood pressure. The user will be designing an hydraulically coupled catheter-transducer which will meet the specifications of measuring blood in a physiological system.

none;none;college/university students

Blood-vessels--Abnormities and deformities

CONGENITAL DEFECTS OF THE HEART AND GREAT VESSELS (pedcard;1977;unpublished)
Green, Michael; Sliwa, W. Gerard
School of Basic Medical Science, Univ. of Illinois

This lesson presents basic physiology and key clinical signs of major congenital defects of the heart and great vessels.

none;none;first year medical students

Blood--Analysis and chemistry

BLOOD COAGULATION II: INTRINSIC AND EXTRINSIC COAG. MECH. (bcoag2;1976;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the University of Illinois

This lesson takes the student through the blood coagulation mechanism step-by-step, factor-by-factor. Included are a description of both the intrinsic and extrinsic coagulation mechanisms, and a discussion of of the role of platelets. A quiz on the entire lesson and drills on the various parts are included.

none;15 minutes;first year medical students

BLOOD COAGULATION I: PLATELETS & CELLULAR ELEMENTS (bcoag3;1977;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the University of Illinois

This lesson provides an introduction to the cellular elements of blood coagulation with heavy emphasis on platelets and platelet function.

none;none;first year medical students

Blood--Circulation

FETAL CIRCULATION GAME (fetal;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.

The lesson is one on the subject of fetal circulation. The student investigates the dictionary definitions of words used in the study of fetal circulation, inspects a series of 17 slides showing the pathways the blood takes as it goes from the placenta, through fetal vesssels, back to the placenta , and then uses the information gained to play a game.

slide selector, microfiche;50-60 minutes;nursing students

INFANT PULMONARY CIRCULATION (pulmon;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.

The lesson reviews the development of the blood circulation in a newborn baby. The circulatory path of the blood is illustrated by drawings on the PLATO screen. The student is shown the differences between fetal and infant circulation and is tested on the information acquired.

none;10 minutes;nursing students

Blood--Circulation, Disorders of

PULMONARY EMBOLISM (shp44;1975;unpublished)
Russell, Lawrence
Sheppard Air Force Base, Texas

This lesson defines the terms associated with pulmonary embolism, describes the difference between pulmonary circulation and systemic circulation, lists the sequence of events which can follow pulmonary embolism, and discusses the treatment and prevention of the disease.

none;2 hours;physicians' assistants

Blood--Coagulation

BLOOD COAGULATION II: INTRINSIC AND EXTRINSIC COAG. MECH. (bcoag2;1976;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the University of Illinois

This lesson takes the student through the blood coagulation mechanism step-by-step, factor-by-factor. Included are a description of both the intrinsic and extrinsic coagulation mechanisms, and a discussion of of the role of platelets. A quiz on the entire lesson and drills on the various parts are included.

none;15 minutes;first year medical students

BLOOD COAGULATION I: PLATELETS & CELLULAR ELEMENTS (bcoag3;1977;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the University of Illinois

This lesson provides an introduction to the cellular elements of blood coagulation with heavy emphasis on platelets and platelet function.

none;none;first year medical students

Blood--Coagulation--Examinations, questions, etc.

BLOOD COAGULATION II: INTRINSIC AND EXTRINSIC COAG. MECH. (bcoag2;1976;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the University of Illinois

This lesson takes the student through the blood coagulation mechanism step-by-step, factor-by-factor. Included are a description of both the intrinsic and extrinsic coagulation mechanisms, and a discussion of of the role of platelets. A quiz on the entire lesson and drills on the various parts are included.

none;15 minutes;first year medical students

Blood--Corpuscles and platelets

BLOOD COAGULATION I: PLATELETS & CELLULAR ELEMENTS (bcoag3;1977;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the University of Illinois
This lesson provides an introduction to the cellular elements of blood coagulation with heavy emphasis on platelets and platelet function.
none;none;first year medical students

TRANSFUSION THERAPY III: THROMBOCYTOPENIA. EVAL. AND TREAT. (thrombo;1978;unpublished)
Burton, Timothy; Siegel, Eliot; Dawson, R. Ben
School of Medicine, Univ. of Maryland, Baltimore
This two-part lesson is third in a series of transfusion therapy lessons, and describes the clinical presentation and laboratory evaluation of thrombocytopenia. The second half of the program discusses immunological causes, with emphasis on diagnosis and treatment. Quizzes follow major topics in the lesson.
none;40 minutes;medical students

TRANSFUSION THERAPY II:PLATELETS AND PLASMA COMP. (bend2;1978;unpublished)
Dawson, R. Ben; Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore
This lesson is second in the series of transfusion therapy lessons. It deals with platelets and plasma clotting factors.
none;20-30 minutes;medical students

Blood--Examination

ANTIGLOBULIN TESTING FOR MEDICAL TECHNOLOGISTS (allisonwk;1976;unpublished)
Allison, Linda
Decatur Memorial Hospital, Decatur, Illinois
This lesson provides information about some of the important clinical uses for the antiglobulin test and some of the reasons for obtaining false results.
none;none;students of medical technology, medical students

HEMOGLOBIN DETERMIN. USING THE KLETT-SUMMERSON COLORIMETER (mcmikewk;1978;unpublished)
McMichael, Joseph L
School of Medicine, Univ. of Maryland, Baltimore
This lesson deals with hemoglobin determination using the Klett. It has three parts: 1) description of the Klett, b) procedure of usage, and c) post-test. A labeled diagram of the Klett is presented with a description of the function of its parts. The procedure explains how the Klett is used, and the post-test requires calculation by the student.
none;none;students of medical technology, medical students

LABORATORY TESTS (shp14;1974;unpublished)
Lacoe, Robert E; Kimball, R M
Sheppard Air Force Base, Texas
This lesson discusses the Rh-hr system and stresses the importance of this system in the practice of medicine. The student then uses this information in a simulated test.
none;7.5 hours;physicians' assistants

Blood--Platelets

BLOOD COAGULATION I: PLATELETS & CELLULAR ELEMENTS (bcoag3;1977;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the University of Illinois
This lesson provides an introduction to the cellular elements of blood coagulation with heavy emphasis on platelets and platelet function.
none;none;first year medical students

TRANSFUSION THERAPY III: THROMBOCYTOPENIA. EVAL. AND TREAT. (thrombo;1978;unpublished)
Burton, Timothy; Siegel, Eliot; Dawson, R. Ben
School of Medicine, Univ. of Maryland, Baltimore
This two-part lesson is third in a series of transfusion therapy lessons, and describes the clinical presentation and laboratory evaluation of thrombocytopenia. The second half of the program discusses immunological causes. with emphasis on diagnosis and treatment. Quizzes follow major topics in the lesson.
none;40 minutes;medical students

TRANSFUSION THERAPY II:PLATELETS AND PLASMA COMP. (bend2;1978;unpublished)
Dawson, R. Ben; Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore
This lesson is second in the series of transfusion therapy lessons. It deals with platelets and plasma clotting factors.
none;20-30 minutes;medical students

Blood--Transfusion

TRANSFUSION THERAPY III: THROMBOCYTOPENIA, EVAL. AND TREAT. (thrombo;1978;unpublished)
Burton, Timothy; Siegel, Eliot; Dawson, R. Ben
School of Medicine, Univ. of Maryland, Baltimore
This two-part lesson is third in a series of transfusion therapy lessons, and describes the clinical presentation and laboratory evaluation of thrombocytopenia. The second half of the program discusses immunological causes, with emphasis on diagnosis and treatment. Quizzes follow major topics in the lesson.
none;40 minutes;medical students

TRANSFUSION THERAPY II:PLATELETS AND PLASMA COMP. (bend2;1978;unpublished)
Dawson, R. Ben; Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore
This lesson is second in the series of transfusion therapy lessons. It deals with platelets and plasma clotting factors.
none;20-30 minutes;medical students

TRANSFUSION THERAPY I: INTRO., RBC TRANSFUSIONS, & REACTIONS (bend;1978;unpublished)
Dawson, R. Ben; Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore
This lesson is the first in a series to acquaint the student with the basics of blood transfusion therapy. It presents the material through an interactional format, where the student is asked to manage a clinical case, and is questioned along the way.
none;none;medical students

Board games

BACKGAM (backgam;1976;1977)
Boggs, Stephen H
Control Data Corporation
This program is a computer version of the standard game of backgammon in which dice are thrown and stones are moved around a board.
none;open-ended;general

BINGO (bingo;1978;1978)
Midden, Marshall; Nortrup, Kevin
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This computerized version of Bingo can be played alone or with others on the system.
none;open-ended;general

CHECKERS (checkers;1977;unpublished)
Blomme, Richard W
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This is a computerized version of the game Checkers. The user may either play against PLATO (an easy opponent) or move both black and white pieces himself.
optional touch panel;open-ended;anyone

CHECKMATE (mate;1974;unpublished)
Vondruska, Richard
University of Illinois, Urbana IL
This lesson attempts to familiarize the student with the use of algebraic chess notation, which is being used as an alternative to English descriptive notation, and to teach the student elementary checkmates.
none;open-ended;general

GO (playgo;1976;1977)
Pavicic, Mark Joseph
Dept. of Elec. Engineering, U. of Illinois

This game is a solitaire and an interterminal version of the standard game of GO in which territory on a board is gained and protected by "stones" placed on the board and moved by the players. In the solitaire version, the opponent is PLATO.

none;open-ended;general

HI-Q (hiq;1975;unpublished)
Polin, Glenn M
University of Illinois, Urbana, Illinois

In this computerized version of the game Hi-Q, pieces may be jumped horizontally and vertically but not diagonally. The object of the game is to end up with only one piece left on the board.

none;open-ended;general

TIC TAC TOE (TOUCH PANEL) (tictac;1977;1978)
Walker, Michael
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

The user plays against PLATO in this touch panel version of tic tac toe.

touch panel;open-ended;general

WELCOME TO CHESS (ychess1;1972;1978)
Thomasson, James; Weast, Gordon
University of Illinois, Urbana, Illinois

The time honored game of chess has been implemented on the PLATO system. Many options are given: playing against the computer, the computer playing various strengths: playing against another person at the same or at a different terminal; playing by 'mail'(leave between moves); playing blind or crazy chess; looking at selected famous games.

none;variable;anyone interested in the game of chess

Body fluids

RENAL PHYSIOLOGY - BODY FLUIDS IV: FLUID COMPARTMENT MECH.
(bfcom3;1978;unpublished)
McCraw, Gordon W; Lawrance, David P; Sommers, Jack M; et al.
Oklahoma University Health Sciences Center

This lesson presents a description of the fluid inputs and outputs of the body, including a description of the body's fluid compartments, with an associated fluid input/output chart for student practice and a post test for adequate feedback.

none;15 minutes;first year medical school

RENAL PHYSIOLOGY - BODY FLUIDS PART II: FLUID COMPARTMENTS (bfcom1;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
In this lesson the student will become familiar with total body water, extracellular, interstitial and intracellular fluids, and lean body mass.
none;15 minutes;first year medical students

RENAL PHYSIOLOGY - BODY FLUIDS PART I: OSMOTIC FORCES (bfcom4;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
In this lesson the student is presented with the material that must be mastered prior to studying renal physiology. Under the heading of osmotic forces, solute concentration, osmolality, the components of plasma and the significance of the anion gap are the subjects discussed.
none;20 minutes;first year medical students

RESTING MEMBRANE POTENTIAL (shp21;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson reviews the structure and functions of a cell membrane necessary for the establishment of the resting membrane potential. The process of active transport is described in detail and its role in cell function defined.
none;60 minutes;physicians' assistants

Bones

HUMAN SKELETAL SYSTEM: PART I - THE THORAX (skelsys2;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This osteology lesson presents the bones of the thorax. Surfaces, borders and markings of the sternum, costal cartilages, and typical and atypical ribs are illustrated and described. Boundaries of the thoracic inlet and outlet are defined. Directions for palpating subcutaneous parts of these bones are included. There is a post-test.
none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART III - THIGH AND LEG (skelsys3;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This osteology lesson presents the bones of the thigh and leg. Surfaces, borders and markings of the femur, patella, tibia and fiblua are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.
none;30 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART V - SHOULDER GIRDLE (skelsys5;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the shoulder girdle. Surfaces, borders and markings of the clavical and scapula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART VI - THE ARM (skelsys6;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the arm and forearm. The surfaces, borders and markings of the humerus, radius and ulna are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PT.II - PELVIC GIRDLE (skelsys;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This lesson on osteology introduces the student to the bones of the pelvic girdle. Surfaces, borders and markings of the hipbone, sacrum and coccyx are illustrated and identified. The bony landmarks of the pelvic inlet and outlet are identified, as well as characteristics which aid in determining the sex of the pelvis. A post-test is included.

none;20 minutes;first year medical students

THE HUMAN SKELETAL SYSTEM: PT.IV - BONES OF THE FOOT (skelsys4;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This lesson presents the osteology of the bones of the foot. Surfaces and markings of the tarsals, metatarsals and phalanges are illustrated and described. Directions for palpating the structures of these bones which are subcutaneous and readily felt in the living body are included. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

Bookkeeping

ACCOUNTS RECEIVABLE (accrec;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.

This lesson teaches methods of handling some of the problems that occur in the area of accounts receivable: in particular, estimating uncollectable receivables, writing off uncollectable accounts, recording collections of previously written-off accounts and aging accounts receivable.

none;none;introductory accounting students

ACCRUAL CONCEPTS (accrual:1978:unpublished)
McKeown. James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson explains the concepts of accrual basis accounting and gives the students practice in learning when to recognize revenue and expenses.
none;15-20 minutes;introductory accounting students

ADJUSTING ENTRIES (acprob;1978;unpublished)
McKeown. James C: Lenehen. Thomas
U of I. Urbana. Ill.: Kennedy-King Col.. Chicago
This lesson familiarizes students with adjustments and gives them practice in making adjusting entries.
none;30-45 minutes;introductory accounting students

ADJUSTING ENTRIES II (stateanal;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides practice in making various kinds of adjusting entries.
none;45-60 minutes;introductory accounting students

BANK RECONCILIATIONS (bankrec;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson presents problems to be worked and should be used only after a discussion or reading of material on Bank Reconciliations.
none;35-50 minutes;introductory accounting students

BREAK-EVEN ANALYSIS (costl:1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews break-even analysis and shows how cost and revenue curves are used in managerial decision making.
none;45 minutes;introductory accountancy students

CAPITAL BUDGETING (irr;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop an understanding of 1) the two main methods of evaluating capital budgeting proposals (Net Present Value and Internal Rate of Return) and 2) the relationship and uses of these two methods.
none;30-45 minutes;introductory accounting students

CHANGES IN THE BALANCE SHEET EQUATION (ibc:1978:unpublished)
McKeown. James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson presents the Balance Sheet Equation and the effect of specific events on Balance Sheet Accounts such as Cash, Inventory, Accounts Receivable and Payable, etc.
none;25-40 minutes;introductory accounting students

CLASSIFICATION AND NORMAL BALANCES (class;1978:unpublished)
McKeown. James C: Lenehen. Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides practice in recognizing proper accounts and making proper entries.
none;10-20 minutes;introductory accounting students

CLOSING ENTRIES (close;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana. Ill.
This lesson provides practice in making closing entries in both a service and a merchandising organization.
none;30-40 minutes;introductory accounting students

COMPOUND INTEREST (jcm;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the fundamentals of compound interest, the methods of computing present and future value, and the use of future value. present value. and present value of annuity tables.
none;open-ended;introductory and managerial accounting students

COST CLASSIFICATION (cost2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson analyzes cost classification by designating costs according to the way in which they can be allocated to the product.
none;10-15 minutes;introductory accounting students

COST VS EQUITY (equity;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the student when and how to use the cost and equity methods of accounting for ownership in long term stock investments.
none;30 minutes;introductory accounting students

ENTRIES FOR CORPORATIONS (tkl;1978;unpublished)
McKeown, James C
Department of Accountacy, U of I, Urbana, Ill.
This lesson teaches the student how to make proper entries for stock issuance under various conditions, i.e., the sale of stock for cash and other assets, the sale of common and preferred shares, the sale of shares at par value or premium.
none;60 minutes;introductory accounting students

FIXED ASSETS I (tab;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the recording of the acquisition of fixed assets and the major methods of depreciating them.
none;60 minutes;introductory accounting students

FIXED ASSETS II (tab2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson completes the review of fixed assets begun in "Fixed Assets I"; specifically to teach the various aspects involved in the disposal of an asset.
none;45 minutes;introductory accounting students

FUNDS FLOW (fundflow;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop the reasons for the Statement of Funds Flow, to explain what funds mean in this context, and to illustrate how the statement is constructed and how it should be interpreted.
none;45-60 minutes;introductory accounting students

FUNDS STATEMENT (fund2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the student the process of collecting and summarizing information in order to present a meaningful Funds Statement.
none;60 minutes;introductory accounting students

GENERAL JOURNAL AND LEDGER (ledger;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accounancy, U of I, Urbana, Ill.
This lesson provides practice journalizing transactions and preparing an income statement from the resultant trial balance, and journalizing closing entries and preparing a balance sheet.
none;open-ended, depending on user's skill;introductory accounting students

INCOME STATEMENT (incst;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the proper form and components of an income statement.
none;30-45 minutes;introductory accounting students

INCREMENTAL ANALYSIS (increm;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson explains the use of incremental analysis to make a choice between alternative courses of action.
none;15-20 minutes;introductory accounting students

INTRODUCTION TO COST ACCOUNTING (cost;1978;unpublished)
McKeown. James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides a review of cost accounting information previously covered in other courses and extends the material on cost accounting beyond what is covered in the classroom.
none;45 minutes;introductory accounting students

INTRODUCTION TO PLATO-IV (accintro;1978;unpublished)
McKeown. James C
Department of Accountancy, U of I, Urbana, Ill.
General instructions in the use of PLATO with specifics applying to accountancy are contained in this lesson.
none;20-30 minutes;accountancy students

INVENTORY METHODS (ltinv;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson is a brief review of inventory evaluation methods through the presentation of several problems in each section.
none;30-45 minutes;introductory accounting students

INVENTORY (PERPETUAL AND INVENTORY ERRORS) (entry3;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson clarifies the difference between perpetual and periodic inventories, illustrates the effect of errors in inventory on cost of goods sold and net income, and tests the student's understanding of the relationship between various elements in an income statement.
none;20-30 minutes;introductory accounting students

JOB-ORDER COSTING (tab3; 1978;unpublished)
McKeown, James C
Department of Accountacy, U of I, Urbana, Ill.
This is to review the elements of job order costing and to give the student practice applying overhead and making the account entries involved in job order costing.
none;60 minutes;introductory accounting students

JOURNAL ENTRIES I (jbc2;1978;unpublished)
McKeown, James C
Dpertment of Accountancy, U of I, Urbana, Ill.
This lesson provides a brief review of T accounts, debits, credits and practice making journal entries in order to see how transactions effect the balance sheet account.
none;60 minutes;introductory accounting students

JOURNAL ENTRIES II (invplan;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson helps provide an understanding of the entries necessary for general journal transactions. Also discussed are some of the different types of general journal transactions encountered in a service type firm amd a merchandise firm.
none;30 minutes per section;introductory accounting students

LONG-TERM INVESTMENTS (ltinve;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop an understanding of the reasons for discount and premium and the methods of calculating amortization and accounting for premium and discounts in relationship to long-term investment in securities. The straight line method of calculating amortization is used.
none;45-60 minutes;introductory accounting students

LONG-TERM LIABILITIES (ltliaba;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the accounting for long-term liabilities from the debtor's point of view. A knowledge of the reasons for and the process of amortization of discount or premium is presumed. The straight line method of calculating amortization is used.
none;20-30 minutes;introductory accounting students

NON-MANUFACTURING COSTS (budget2:1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the problems and methods of controlling marketing and administrative costs.
none;60 minutes;introductory accounting students

NOTES AND INTEREST (notint;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson familiarizes the student with recording notes and calculating and recording interest and discounts.
none;45-60 minutes;introductory accounting students

OPERATIONAL AND PRODUCTION BUDGETING (budget;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson on operational and production budgeting presents problems in in each of the following areas: economic order quantity, projecting performance, flexible budgeting and formula budgeting. There is no introductory or review material, but help is available.
none;20-30 minutes;managerial accounting students

PROCESS COSTING (cost3;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson is a review of the product costing aspects of cost accounting as used for inventory valuation and income determination and as a basis for pricing.
none;60-90 minutes;introductory accounting students

SPECIAL JOURNALS (sj;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews various special journals and gives the students practice in classifying events using these journals.
none;5-10 minutes;introductory accounting students

STANDARD COSTING I (std1;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson introduces the aspects of standard cost related to direct materials, direct labor and manufacturing overhead.
none;15 minutes;introductory accounting students

STANDARD COSTING II (standard;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson illustrates the application of standard costing and familiarizes students with the analysis and recording of material and labor price (rate) and usage (efficiency) variances.
none;45 minutes;introductory accounting students

TEMPORARY INVESTMENTS (tempinv;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches initial recording of temporary investments, recording revenue from temporary investments, valuation of temporary investments, disposition of temporary investments.
none;45-60 minutes;introductory accounting students

TERMS OF SALE (discount;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson familiarizes the student with various terms of sale and allows them to compute invoice price discounts and freight charges.
none;30-45 minutes;introductory accounting students

WORKSHEETS (worksheet;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides the student with practice using a worksheet to summarize all accounts with non-zero balances.
none;30-45 minutes;introductory accounting students

Bookkeeping--Problems, exercises, etc.

WORKSHEETS (worksheet;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides the student with practice using a worksheet to summarize all accounts with non-zero balances.
none;30-45 minutes;introductory accounting students

Botany

ENZYME-HORMONE INTERACTIONS (botony;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson helps the student to understand the relationship of enzymes and hormones, to determine the effect of IAA and GA on the growth form of Alaska and Dwarf peas, and to find the specific activity of IAA oxidase.
none;20-40 minutes;college/university students

EXPERIMENTS IN PHOTOSYNTHESIS (photosyn2;1975;1980)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson aids the student in identifying, by various experimental procedures, environmental factors which affect photosynthesis. The student also learns to interpret data obtained from simulated experiments.
none;20 minutes;college/university students

EXPERIMENTS IN RESPIRATION (respirl;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson explains the dependence of mitochondrial activity and enzyme activity on temperature. The student also designs an experiment to determine optimum temperature for activity.
none;30 minutes;college/university students

FLOWERING AND PHOTOPERIOD (bota;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanism of flowering in response to light.
none;30-45 minutes;college/university students

FRUITING AND LEAF SENESCENCE (botb;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson describes fruit formation, growth and maturation and enables the student to deduce the physiology of leaf abscission from hormone experiments.
none;15-20 minutes;college/university students

INTRODUCTION TO SEED GERMINATION (morphogen;1973;1980)
Wolniak, Steven; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the processes of seed germination and dormancy and defines the optimum conditions for seed germination.
none;30-40 minutes;college/university students

INTRODUCTION TO WATER RELATIONS (botwat:1975:unpublished)
Silvius, John
Botany Dept., U of I, Urbana, Ill.
This lesson discusses the factors that influence the direction of water movement across membranes.
none;15 minutes;college/university students

ORGANIZATION OF THE HIGHER PLANT (morpho;1976;unpublished)
Haney, Alan W; May, Gary N
Botany Department, U of I, Urbana, Illinois
This lesson explains how each plant organ is specialized for its particular function.
microfiche;45 minutes;college/university students

PHOTOSYNTHESIS (photosyn1;1973;1980)
Haney, Alan W; Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson describes the relationship of leaf structure and function, explains the principles of chromatography, identifies the fate of raw materials in photosynthesis and illustrates the varying photosynthetic efficiencies of plants.
none;40 minutes;college/university students

PLANT GENETICS PROBLEMS (genprob;1973;unpublished)
Noell, John; May, Gary N; Haney, Alan W; et al.
Botany Dept., U of I, Urbana, Ill.
This lesson aids the student in determining the genetic composition of parents from progeny, when one or two traits are involved.
none;20 minutes;college/university students

PLANT GROWTH (botc;1973;unpublished)
Manteuffel, Mary; Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson explains the stages of stigmoid growth curve and evaluates the results of the student growth experiments with corn, beans and peas.
none;20-30 minutes;college/university students

PLANT LIFE CYCLES (cycles;1974;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson constructs a diagram of a generalized plant life cycle, discusses the relationship between gametophyte and sporophyte generations and illustrates how this relationship differs throughout the plant kingdom, with special emphasis on its evolutionary significance.
microfiche;90 minutes;college/university students

PLANT PATHOLOGY: AN INTRO. TO DISEASE AND KOCH'S POSTULATES (pathos;1974;unpublished)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
In this lesson the student will learn to formulate a procedure for identifying the pathogen causing a disease and to calculate the dilution factor for making soil cultures.
microfiche;40 minutes;college/university students

PLANT RESPONSES AND APICAL DOMINANCE (lcyc;1973;unpublished)
Noell, John; Manteuffel, Mary
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanisms of plant responses to light and gravity and describes hormonal control of apical dominance.
none;30-40 minutes;college/university students

PLANT TAXONOMY (taxon1;1975;unpublished)
Haney, Alan W
Botany Dept., U of I, Urbana, Ill.
This lesson teaches the student to use a taxonomic key and to recognize plant characteristics commonly used in vegetative keys.
microfiche;45 minutes;college/university students

POPULATIONS LABORATORY USING E. COLI (pop;1974;1980)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson describes how populations grow and identifies factors affecting the growth of bacterial populations.
none;15-25 minutes;college/university students

RESPIRATION AND ENZYMES (respir;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the general scheme of glycolysis, Krebs cycle and electron transport. It also helps the student to understand the relationship of glycolysis to aerobic respiration.
none;45 minutes;college/university students

A TOOL: THE SPECTROPHOTOMETER (spectro;1973;1980)
May, Gary N; Novitzky, William P
Botany Dept., U of I, Urbana, Ill.
This lesson teaches the student to use a spectrophotometer and to interpret the data obtained from the instrument.
none;25 minutes;college/university students

TREE IDENTIFICATION QUIZ (taxon2;1975;unpublished)
Haney, Alan W
Botany Dept., U of I, Urbana, Ill.
This is a quiz to aid the student in successfully "keying-out" five trees. It should be used after completion of the lesson "Plant Taxonomy."
microfiche;15 minutes;college/university students

WATER RELATIONS LABORATORY (botwat2;1975;unpublished)
Silvius, John
Botany Dept., U of I, Urbana, Ill.
In this lesson the student learns a method for determining the water potential of living cells and learns to describe the conditions which affect transpiration by manipulating a potometer.
none;40 minutes;college/university students

Botany--Anatomy

INTRODUCTION TO SEED GERMINATION (morphogen;1973;1980)
Wolniak, Steven; May, Gary N
Botany Dept., U of I, Urbana, Ill.

This lesson describes the processes of seed germination and dormancy and defines the optimum conditions for seed germination.

none;30-40 minutes;college/university students

ORGANIZATION OF THE HIGHER PLANT (morpho:1976:unpublished)
Haney, Alan W; May, Gary N
Botany Department, U of I, Urbana, Illinois

This lesson explains how each plant organ is specialized for its particular function.

microfiche;45 minutes;college/university students

Botany--Classification

PLANT TAXONOMY (taxon1;1975;unpublished)
Haney, Alan W
Botany Dept., U of I, Urbana, Ill.

This lesson teaches the student to use a taxonomic key and to recognize plant characteristics commonly used in vegetative keys.

microfiche;45 minutes;college/university students

Botany--Identification

PLANT TAXONOMY (taxon1;1975;unpublished)
Haney, Alan W
Botany Dept., U of I, Urbana, Ill.

This lesson teaches the student to use a taxonomic key and to recognize plant characteristics commonly used in vegetative keys.

microfiche;45 minutes;college/university students

Botany--Methodology

EXPERIMENTAL TECHNIQUE (ecos;1975;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.

This lesson presents the universally accepted procedure for the acquisition of scientific knowledge and analyzes the steps in the process, with conversions between English and metric measures included.

none;45 minutes;college/university students

LIFE IN A MICROCOSM (ecos2;1975;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.

This lesson helps the student to evaluate hypotheses and experimental designs for their potential to yield a sound conclusion, and to interpret results of research accurately.

none;20 minutes;college/university students

Botany--Morphology

FLOWERING AND PHOTOPERIOD (bota;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanism of flowering in response to light.
none;30-45 minutes;college/university students

Botany--Pathology

PLANT PATHOLOGY: AN INTRO. TO DISEASE AND KOCH'S POSTULATES (pathos:1974;unpublished)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
In this lesson the student will learn to formulate a procedure for identifying the pathogen causing a disease and to calculate the dilution factor for making soil cultures.
microfiche;40 minutes;college/university students

Botulism

NOXIOUS DRUGS (shp33;1974;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson discusses drug classes and individual drugs exhibiting toxic manifestations in the respiratory system.
none;60 minutes;physicians' assistants

Brachial plexus

INTRODUCTION TO THE HUMAN NERVOUS SYSTEM: NERVE PLEXUSES (nervplex;1976;unpublished)
Wadsworth, Gladys E; Bennett, Charles
School of Medicine, Univ. of Maryland, Baltimore
This lesson describes the plexuses derived from ventral rami of spinal nerves. It develops schematically the major structural components of the brachial plexus and relates the effect severance of these components has upon the muscles they innervate.
none;15 minutes;first year medical student

Brain damage

THE UNANSWERABLE WORD-LANGUAGE DYSFUNCTION (curtiss20;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson presents common patterns of language dysfunction secondary to organic brain damage, and a brief discussion of dysarthria.
optional touch panel;10-20 minutes;occup. therapy and med. students

Brain stem--Anatomy

ANATOMY OF THE BRAINSTEM (med1;1978;unpublished)
Lehr, Robert P; Wong, Did (Ben); Farney, Thomas L
Southern Illinois University School of Medicine

This lesson consists of 11 exercises, each of which is a cross-section of the brainstem. The student is asked to identify structures in the cross-sections as they are randomly presented.

none;none;first year medical students

Brain--Anatomy

ANATOMY OF THE BRAINSTEM (med1;1978;unpublished)
Lehr, Robert P; Wong, Did (Ben); Farney, Thomas L
Southern Illinois University School of Medicine

This lesson consists of 11 exercises, each of which is a cross-section of the brainstem. The student is asked to identify structures in the cross-sections as they are randomly presented.

none;none;first year medical students

BASIC BRAIN ANATOMY (curtiss4;1977;unpublished)
Dubrick, Anton J; Curtis, Brian A
Peoria School of Medicine of the Univ. of Illinois

Part I of this lesson discusses the medulla, pons and midbrain, cerebellum and diencephalon. Part II presents the cortical lobes, cortical landmarks and primary motor and sensory cortices. The student is given an opportunity to learn the location of each part and its associated functions.

touch panel;20-30 minutes;first year medical students

Brain--Tumors

BIG CITY NEUROLOGIST AND MRS. CRIBBLECROBBLES (curtiss19;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois

This lesson presents a case study review of the findings of a classical brain tumor syndrome.

none;10-20 minutes;students of occupational therapy, medical students

Breast--Cancer

ORAL CONTRACEPTIVES AND NEOPLASIA (ocneo;1979;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois

This lesson reviews the types of epidemiological studies used to investigate the possible relationships between oral contraceptive use and neoplasia. The risk factors for contracting breast, cervical, endometrial, and liver cancer are reviewed, and the results of studies relating oral contraceptive use to the aforementioned cancers are presented.

none;30 minutes;first year medical students/health science students

Breast--Surgery

UPPER MEMBER CLINICAL APPLICATION (umclinl;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

Three problems with a clinical flavor illustrate for the student the efficacy of anatomical knowledge in medical practice: 1) consequences of severing the deep radial nerve, 2) consequences of injury to radial nerve by midshaft fracture of the humerus, and 3) consequences of brachial plexus injury by shoulder hyperdepression.

none;10 minutes;first year medical students

Bromination

FREE RADICAL HALOGENATION REACTIONS (radical;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson illustrates the mechanism of free radical chlorination and bromination of alkanes and shows how to calculate the heats of reactions from bond energies.

none;57 minutes;college/university students

REACTIONS OF ALDEHYDES AND KETONES (PART 2) (ketone2;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson continues the discussions of reactions of aldehydes and ketones.The subjects include enolization, H-D exchange, halogenation of ketones, and aldol condensation reactions with appropriate problems.

none;55 mminutes;college/university students

Bronchitis

CHRONIC BRONCHITIS (shp108;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas

This lesson presents the one major factor in developing chronic bronchitis. The student will also learn to determine whether or not an individual has chronic bronchitis and what are the proper modes of therapy for the patient.

none;60-90 minutes;physicians' assistants

Bronchospirometry

PULMONARY FUNCTION TESTING (shp93;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas

This lesson discusses specific tests which assess a patient's pulmonary function. The student is given a chance to practice interpreting test results for some hypothetical patients.

none;90 minutes;physicians' assistants

Bryophytes

PLANT LIFE CYCLES (cycles;1974;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.

This lesson constructs a diagram of a generalized plant life cycle, discusses the relationship between gametophyte and sporophyte generations and illustrates how this relationship differs throughout the plant kingdom, with special emphasis on its evolutionary significance.

microfiche;90 minutes;college/university students

Budget in business

OPERATIONAL AND PRODUCTION BUDGETING (budget;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.

This lesson on operational and production budgeting presents problems in in each of the following areas: economic order quantity, projecting performance, flexible budgeting and formula budgeting. There is no introductory or review material, but help is available.

none;20-30 minutes;managerial accounting students

Buffer solutions

AMINO ACIDS, PEPTIDES, PROTEINS, AS ACIDS AND BASES (mph3;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois

This lesson reviews the acid-base character of amino acids. peptides and proteins, and examines the concepts of pH, H^+, HA, K', pK' and buffers at the biochemical level.

none;15 minutes;first year medical students

BUFFER PROBLEMS (mph2;1975;unpublished)
Agee, C. Coe; Rende, R J
School of Basic Medical Sciences, Univ. of Illinois

This lesson explains the concept of buffers as it applies to biological systems. It presents the methods for calculating and preparing buffers by titration and by molecular weight. There is a drill in the form of typical buffer problems with randomly generated values for conjugate acid, conjugate base, and pH, for the student to solve.

none;15 minutes;first year medical students

Business education

Typewriting

BEGINNING TYPING (btype;1976;1977)
Appel, Andrew W
University High School

This is a course to teach the user how to touch type. Upon completion of this course, the student should be able to type reasonably well on PLATO, and should be able to become accustomed to a typewriter.

none;1 1/2 hours;beginning typists - high school/college level

THE DVORAK SIMPLIFIED KEYBOARD/THE AMER. STANDARD KEYBOARD
(dvorak;1975;unpublished)
Eisenberg, John D
University of Illinois

This lesson provides typing practice with the Dvorak simplified keyboard and with the American standard keyboard. For instruction and supplemental information, a textbook should be consulted. Each keyboard is drilled in four major sections with ten practice sets, before a five-sentence timed test.

none;open-ended;general

TECHNICAL TYPING DRILL (typing;1979;unpublished)
Worley, Thomas R
University High School, Urbana, Illinois

This lesson provides a one-minute typing drill using random sentences of technical language.

none;open-ended;general

TYPING DRILL (debugs;1975;1977)
Midden, Marshall
Computer-based Educ. Res. Lab., University of Illinois

A typing drill is presented in which the participant can compete against the records of other users. If the new time is better than others, it is listed with some of the other record holders.

none;none;none

Business law

GOVERNMENT REGULATION LESSON 1 -- PUBLIC UTILITY ACCOUNTS
(magg;1978;unpublished)
Maggs, Peter B; Platt, Robert C
College of Law, University of Illinois, Urbana, Ill.

This lesson gives law students without previous accounting training the necessary background to understand more advanced instructional materials on legal regulation of public utilities. It covers the distinction between debt and equity, the calculation of profit and return on investment, and the calculation of operating expenses and depreciation.

none;25-30 minutes;second or third year law students

UTILITY REGULATION LESSON 2 -- RATEMAKING SIMULATION (maggl;1979;unpublished)
Maggs, Peter B; Morgan, Thomas D; Platt, Robert C
College of Law, University of Illinois, Urbana

This simulation is designed to provide the law student with a minimum knowledge of the basic accounting and legal rules governing the regulation of rates charged by public utilities. The user plays the role of a young law graduate hired by the State Utility Commission, whose job involves making a series of decisions in the ratemaking proceedings of a phone company.

none;60 minutes;law students, business students

Calcium in the body

MACROMINERALS (macmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I

This lesson presents information about macrominerals, or those minerals required in the human diet in amounts exceeding 100 mg. per day. The macrominerals are calcium, phosphorus, magnesium, potassium, sodium, sulphur and chlorine.

none;25-30 minutes;nutrition students

Calculators

A BETTER TERM CALCULATOR (termcalc;1979;1980)
Marquart, David; Hanes, Larry
Dept. of Elec. Engineering, Univ. of Illinois

This program provides an extended version of the TERM-calc calculator available on the PLATO system. The details of its functions are described and the calculator can be attached the the user's own lesson.

none;open-ended;PLATO lesson authors

CALC-O-MATIC (calcomatic;1976;1976)
Brown, Douglas W
University of Illinois at Urbana-Champaign

This is a utility lesson for the evaluation of complex number expressions. Explanations are given for the use of the calculator for expressions involving functions, factorials, combinations and permutations, substitution, graphing, series evaluations and limit approximations.

none;open-ended;general

EXTENDED TERM-CALC CALCULATOR (calculator; 1978;unpublished)
Eastom, Mark
Purdue Univ. at Fort Wayne, Ft. Wayne, Indiana

This program is an extension of the TERM-calc type calculator available on the PLATO system. It allows both binary and hexadecimal entries. Displays are available in both integer and floating point forms of binary, octal, hexadecimal and "hidden" formats.

none;open-ended;PLATO system authors

THE MATRIX CALCULATOR (calc21;1973;1977)
Parrello, Bruce
University of Illinois

This lesson consists primarily of a calculator designed for performing routine operations on matrices.

none;open-ended;freshman/sophomore college

MINI-CALCULATOR (calca;1975;1978)
Bennett, Carol D
Physics Department, University of Illinois
The program is a utility program providing a small calculator without user-defined functions; it includes real or complex numbers, random numbers, and array operations.
none;open-ended;students in mathematics, physics, and other sciences

NUMERICAL ANALYSIS UTILITY (calc;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
This is a utility program to aid in numerical analysis. The program provides an elaborate calculator and x-y function plotter with user-defined functions A-Z and variables a-z.
none;open-ended;students of mathematics and physics

PROCALC (I) (procalc;1977;1979)
Thomasson, James
University of Illinois
The purpose of this lesson is that of a calculator designed to do work. For programmed operation, the program consists of a list of instructions which are processed sequentially. In this sense, the calculator forms the simplest type of computer.
none;open-ended;general

REVERSE POLISH NOTATION (rpcalc;1976;1978)
Nudelman, Mark
Department of Computer Science, University of Illinois
This lesson explains reverse notation and presents a simulation of a reverse polish notation calculator.
this lesson requires a touch panel;open-ended;none

TOUCH-O-MATIC CALCULATOR (touchcalc;1976;1977)
Gilfillan, James W
Comp.-based Educ. Res. Lab., University of Illinois
The program simulates a calculator operated by means of touching points on the screen. It was written to demonstrate the calculating power of the PLATO system and the use of the touch panel. Error messages for incorrect expressions are provided and the capabilities include calculations of time, date, day, functions, exponentials, absolute numbers, etc.
touch panel;open-ended;general

Calculus, Differential

CALCULUS 2, PRACTICING DIFFERENTIATION (pcalc2;1976;1977)
Schreiner, Axel T
Department of Computer Science, University of Illinois

This lesson allows practice in differentiation with diagnostic aid given for all types of errors in syntax, etc. The student writes a formula and then can evaluate the expression, differentiate it or assign a value to a letter constant. There are help sequences available . The exercise can be tried for as many formulas as desired.

none;open-ended;college freshmen/sophomores

GRAPHICAL KINEMATICS (grafdif;1973,77;1978)
McNeil, E B
Physics Dept., Univ. of Ill. at Chicago Circle

The lesson teaches the connection between the slope of a curve and its derivative, in other words: graphical differentiation. The student makes input by means of a graphics cursor. The immediate feedback provides an advantage over the usual homework problem pencil and paper method of practice and understanding of the subject.

none;2 hours;college and university students

Cameras

CAMERA OPERATION (media2;1976;unpublished)
Clegg, Janet T
Iowa State University, Ames, Iowa

The lesson teaches the student how to operate an adjustable camera including setting the aperture and speed of the shutter. The use of a microfiche enables the student to see immediately the photographic results of the aperture and speed choice made for each picture. The PLATO technique saves wasting real film practicing photographing.

slide selector, microfiche;none;college and university students

CAMERA OPERATION II (media3;1975;unpublished)
Clegg, Janet T
Iowa State University, Ames, Iowa

The lesson contains practice problems in adjusting camera aperture and speed in photography. The program requires a microfiche to simulate the results of the picture-taking.

slide selector, microfiche;none;college students in photography

Cancer--Chemotherapy

CHEMOTHERAPEUTICS: MALIGNANT NEOPLASMS (kumc34;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois

This lesson discusses chemotherapeutic treatment of cancer. The relationship of tumor cell toxicity to host cell toxicity known as chemotherapeutic index is explained.

none;20 minutes;first year medical students

Capital budget

CAPITAL BUDGETING (irr;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop an understanding of 1) the two main methods of evaluating capital budgeting proposals (Net Present Value and Internal Rate of Return) and 2) the relationship and uses of these two methods.
none;30-45 minutes;introductory accounting students

Carbohydrate metabolism

CARBOHYDRATE METABOLISM III: GALACTOSE, FRUCTOSE, MANNOSE (mcatsug;1976;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews glycolysis/gluconeogenesis and then covers the catabolism of the sugars, galactose, fructose, mannose, and of glycerol. For each compound there is a short textual discussion, question/answer section and a drill over names of enzymes and metabolites.
none;45 minutes;first year medical students

CARBOHYDRATE METABOLISM II: GLUCONEOGENESIS (mgluneo;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews glycolysis, compares and contrasts glycolysis and gluconeogenesis, describes the reactions unique to gluconeogenesis, drills the names of metabolites and enzymes, and provides a quiz over all.
none;55 minutes;first year medical students

CARBOHYDRATE METABOLISM IV: CONTROL OF CARBOHYD. METABOLISM (mcarbcon;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson deals with the control processes of the glycolytic and gluconeogenic pathways. It has two sections of questions, the first covering the ways in which various allosteric modifiers affect these pathways, and the second covering the means by which the enzymes of these pathways are controlled.
optional touch panel;none;first year medical students

CARBOHYDRATE METABOLISM I: GLYCOLYSIS (mglyco;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents the glycolytic pathway from glucose through pyruvate, with a drill at the end.
none;20 minutes;first year medical students

HORMONAL CONTROL: CARBOHYDRATE AND LIPID METABOLISM (endo;1978;unpublished)
Jackson, Gary L; Johnson, E. Wayne; Trynda, Richard S
College of Veterinary Medicine, University of Illinois
In this program the user will study the effects of five hormones on the levels of blood glucose and the stimuli for their release, as well as the mechanism of muscle, liver and adipose cell response to the same five hormones. A short quiz is given after each section and a comprehensive quiz may be taken at the end of the lesson.
none;none;students of veterinary medicine

Carbohydrates

CARBOHYDRATES (nutr3;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
The third lesson in the Nutrition Series presents material on the different carbohydrates, their utilization for energy, and food sources.
none;25-30 minutes;nutrition students

CARBOHYDRATES III: CARBOHYDRATE IDENTIFICATION AND STRUCTURE (mcarbo;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides drill and practice in the identification of common carbohydrates and carbohydrate derivatives.
none;25 minutes;first year medical students

CARBOHYDRATES IV: IDENTIFICATION OF CARBOHYDRATES (mcarbqz;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson is a competitive exercise in which students are asked to identify structures of carbohydrates and their derivatives, picked randomly. Speed and accuracy are emphasized and students compete for the lowest score (i.e., the lowest time with the fewest mistakes).
none;10 minutes;first year medical students.

CARBOHYDRATES, PART IIA: STRUCTURE OF MONOSACCHARIDES (CONT) (sugar2a;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois
The lesson is a review of the structure representation of single unit carbohydrates. It is the third in a series of lessons on carbohydrates and is a continuation of "Carbohydrates, Part II."
none;30 minutes;college and university students of organic chemistry

CARBOHYDRATES, PART III: REACTIONS OF MONOSACCHARIDES (sugar3;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois
The lesson is the fourth in the series on carbohydrates. This part treats the reactions of monosaccharides.
none;1 hour;college and university students of organic chemistry

CARBOHYDRATES, PART II: STRUCTURES OF MONOSACCHARIDES (sugar2;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois
The lesson discusses some of the various means of structure representation of single unit carbohydrates. This is the second in a series of lessons on carbohydrates.
none;1 hour;college or university students of organic chemistry

CARBOHYDRATES, PART I: INTRODUCTION TO MONOSACCHARIDES (sugar1;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois
The lesson presents the definition and classification of single unit carbohydrates called monosaccharides. It is the first in a series of lessons on carbohydrates.
none;1 to 1.5 hours;college and university students of organic chemistry

MUTAROTATION OF GLUCOSE (glucose;1975;1977)
Smith, Stanley
Department of Chemistry, University of Illinois
The lesson deals with the purification of glucose and some of its chemical properties. The laboratory separation of the enantiomers of glucose is simulated and the student measures optical activity and mutarotation. Conclusions can be drawn from the measurements about the composition of a solution of glucose in water.
none;33 minutes;college/university students

Carbonyl compounds

CARBOHYDRATES, PART II: STRUCTURES OF MONOSACCHARIDES (sugar2;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois
The lesson discusses some of the various means of structure representation of single unit carbohydrates. This is the second in a series of lessons on carbohydrates.
none;1 hour;college or university students of organic chemistry

Carbonyl groups

CARBOHYDRATES, PART II: STRUCTURES OF MONOSACCHARIDES (sugar2;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois
The lesson discusses some of the various means of structure representation of single unit carbohydrates. This is the second in a series of lessons on carbohydrates.
none;1 hour;college or university students of organic chemistry

Carboxylic acid

ESTERS OF CARBOXYLIC ACID (esters;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson is on the preparation and reactions of esters. Experiments are simulated to determine the mechanism of esterification, labeled oxygen exchange and hydrolysis.
none;28 minutes;college/university students

INTRODUCTION TO CARBOXYLIC ACIDS (rcooh;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson deals with carboxylic acids, their structure, nomenclature and acidity.
none;35 minutes;college/university students

PREP. AND REACTIONS OF CARBOXYLIC ACID: PRACTICE PROBLEMS (acidprob;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson offers review problems on the interconversion of acids, esters, amides, acid chlorides and amides.

It does not function without a touch panel.
touch panel;25 minutes;college/university students

Card games

CALCULATION (calculate;1977;1978)
Entwistle, William C
Institute of Aviation, Univ. of Illinois, Urbana, Ill.
This is a game of solitaire in which one builds twelve cards on each of four foundations in arithmetic sequence. Cards are turned up one by one and either played on foundation piles or discarded on waste piles. Strategy is involved in stacking cards on waste piles so as to optimize for their later removal.
optional touch panel;variable;anyone

Cardiac arrest

see Heart failure

Cardiology

THE CARDIAC CYCLE (pcg;1974;1978)
Smetzer, David L; Martin, G S; Koehn, Charles E
College of Veterinary Medicine, Univ. of Illinois
The lesson presents information for the study of the heart beat with regard to electrical events, hemodynamic events and acoustic events. On completion of the lesson the student should be able to specify what events are occurring in the cardiac cycle when a specific event is given.
none;2 hours;professonal students of veterinary medicine

Cardiology--Terminology

ELECTROCARDIOGRAPHY (ekg0;1974;1978)
Smetzer, David L; Koehn, Charles E
College of Veterinary Medicine, University of Illinois

The lesson describes by animated graphics the sequence of spread of electrical activity through the normal heart and relates the spread of electrical activity to the genesis of the electrocardiogram. The lesson is non-interactive ss far as the student is concerned.

none;one hour;students of veterinary medicine

Cardiovascular agents

AUTONOMIC PHARMACOLOGY: ARTERIAL BLOOD PRESSURE IN THE DOG (kumc12;1975;unpublished)
Kansas University Medical Center; Hody, George; Stull, Richard; et al.
University of Kansas / University of Illinois

This lesson is a brief graphic quiz over various autonomic receptor agonists and antagonists, and their effects on certain cardiovascular parameters in the laboratory.

none;5 minutes;first year medical students

Cardiovascular pharmacology

CASE HISTORY: MANAGEMENT OF HYPERTENSION (kumc36;1975;unpublished)
Kansas University Medical Center; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois

This lesson simulates the examination, diagnosis and treatment of an hypertensive patient. Discussion of therapeutic agents is provided.

none;15 minutes;first year medical students

Cardiovascular system

THE CARDIAC CYCLE PT. II: PHYS. PARAM. OF THE CARDIAC CYCLE (heartcycl2;1975;unpublished)
Frasher, Wallace G; Rikel, James E
University of Southern California

This lesson continues the discussion begun in part one of "The Cardiac Cycle" with emphasis on the physical parameters of the cycle.

none;15 minutes;first year medical students

THE CARDIAC CYCLE PT. I: DIR. OF FLOW & BASIC CARD. ANATOMY (heartcycl1;1975;unpublished)
Frasher, Wallace G; Rikel, James E
University of Southern California

This lesson discusses the relationship of the mechanical functions performed by the heart to the sequential events of the cardiac cycle and blood propulsion. The student should be able, upon completion, to reproduce the cardiac cycle diagram, and recall and properly locate any anatomical structure mentioned in this lesson.

none;15 minutes;first year medical students

CONGENITAL CARDIAC DEFECTS (cardianom;1977;unpublished)
Choate, B. Paul; McCraw, Gordon W; Sharpe, George
Oklahoma University Health Sciences Center
This lesson is concerned with the clinical and pathological aspects of various congenital cardiac defects. It also covers the development and etiology of such defects. Some of the defects covered are ventriculo-septal defects, transposition of vessels, valvular and combinations defects.
optional touch panel;30 minutes;first year medical students

INTERPRETATION OF EKG (cardiol;1977;unpublished)
Flanders, Samuel J
Peoria School of Medicine, University of Illinois
In this lesson the student is given a basic introduction to the use of electrocardiograms in physical diagnosis, including how they are made and how to read them.
none;none;first year medical students

Care of the sick

POST OPERATIVE NURSING CARE (postop;1978;1978)
Kirchhoff, Karen
School of Nursing, Univ. of Ill. Med. Ctr., Chicago
The lesson teaches the basis for planning nursing care for a postoperative patient. The focus is on the nursing care of patients who have had general surgery and a normal post-operative recovery. The "time period" is the immediate post-operative phase after transfer from the Recovery Room. General intervention and evaluation criteria are stressed.
none;none;professional nursing students

Cartilage

HUMAN SKELETAL SYSTEM: PART I - THE THORAX (skelsys2;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This osteology lesson presents the bones of the thorax. Surfaces, borders and markings of the sternum, costal cartilages, and typical and atypical ribs are illustrated and described. Boundaries of the thoracic inlet and outlet are defined. Directions for palpating subcutaneous parts of these bones are included. There is a post-test.
none;20 minutes;first year medical students

Catalog cards

HOW CAN I USE THE CARD CATALOG? (library1;1977;unpublished)
Park, Chung I
Library, Malcolm X College, Chicago, Illinois
This lesson provides information on how to use the card catalog in a library, emphasizing the fact that it is more than just a location finder for books. Each line of information on the catalog card is illustrated and explained. Additionally, the arrangement of cards within the catalog drawers is discussed.
none;60 minutes;community college/undergraduate students

Catalogs
Articles (PLATO)
ARTICLES ABOUT THE PLATO SYSTEM (articles;1976;1977)
Lyman, Elisabeth R
Comp.-based Educ. Res. Lab., University of Illinois
This program is a bibliography of articles on the PLATO system and related subjects arranged for viewing alphabetically by author, by broad subject headings or chronologically by date of publication.
none;open-ended;everyone

Catalogs
PLATO curricular materials
PLATO CURRICULAR MATERIALS (topics;1977;1976)
Lyman. Elisabeth R
Comp.-based Educ. Res. Lab., University of Illinois
The program provides information on completed lessons which have been used in actual instructional situations and which were written for the University of Illinois PLATO IV System.

none:open-ended:general

Catalogs, Card
HOW CAN I USE THE CARD CATALOG? (library1;1977;unpublished)
Park, Chung I
Library, Malcolm X College, Chicago, Illinois
This lesson provides information on how to use the card catalog in a library, emphasizing the fact that it is more than just a location finder for books. Each line of information on the catalog card is illustrated and explained. Additionally, the arrangement of cards within the catalog drawers is discussed.
none;60 minutes;community college/undergraduate students

Cations
CHEMICAL NOMENCLATURE - COMPOUNDS WITH MULTIVALENT CATIONS (chemnom4;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
The final lesson in the series on Chemical Nomenclature is on naming compounds with multivalent cations. This lesson like the others contains practice problems.
none;none;college/university students

INORGANIC NOMENCLATURE (chemnom;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
The lesson gives instruction in how to name some chemical compounds (ions, salts, acids, and multivalent cations). Practice drills are included. All the material is in one lesson. Similar material by the same author is divided into three lessons which are described separately.
none;39 minutes;college/university students of beginning chemistry

SEPARATION OF CATIONS FROM SOLUTION (iqual;1973;unpublished)
Francis, Larry D
Computer-based Educ. Res. Lab., Univ. of Illinois

The lesson presents a simulated laboratory exercise to the student. He is given a mixture of four ions in the same test tube and is required to separate these into four test tubes by selective precipitation. He may review materials on the concepts of precipitation and access descriptions of reagents to gain information for appropriate test selections.

none;none;college/university students

Cell membranes

CELL INJURY II: ORGANELLE CHANGES: ACUTE CELL INJURY (cell2;1977;unpublished)
Mergner, Wolfgang; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore

This lesson stresses the biochemical and structural changes in acute cell injury, as well as altered organelles. Mitochondrial changes are discussed in detail and compared to changes in the cytosol, nucleus, lysosol, cell membrane and endoplasmic reticulum. Reaction to cell injury is subdivided into three phases: before, at or after the point-of-no-return.

none;45 minutes;first year medical students

RESTING MEMBRANE POTENTIAL (shp21;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas

This lesson reviews the structure and functions of a cell membrane necessary for the establishment of the resting membrane potential. The process of active transport is described in detail and its role in cell function defined.

none;60 minutes;physicians' assistants

Cell nuclei

CELL INJURY II: ORGANELLE CHANGES: ACUTE CELL INJURY (cell2;1977;unpublished)
Mergner, Wolfgang; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore

This lesson stresses the biochemical and structural changes in acute cell injury, as well as altered organelles. Mitochondrial changes are discussed in detail and compared to changes in the cytosol, nucleus, lysosol, cell membrane and endoplasmic reticulum. Reaction to cell injury is subdivided into three phases: before, at or after the point-of-no-return.

none;45 minutes;first year medical students

Cell organelles

CELL INJURY II: ORGANELLE CHANGES: ACUTE CELL INJURY (cell2;1977;unpublished)
Mergner, Wolfgang; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore

This lesson stresses the biochemical and structural changes in acute cell injury, as well as altered organelles. Mitochondrial changes are discussed in detail and compared to changes in the cytosol, nucleus, lysosol, cell membrane and endoplasmic reticulum. Reaction to cell injury is subdivided into three phases: before, at or after the point-of-no-return.

none;45 minutes;first year medical students

Cells

CELL GROWTH (coli;1976;1978)
Francis, Rosanne; Kaplan, Samuel
Dept. of Microbiology, Sch. of Life Sciences, U of I

This is the first of a series of lessons on cell growth written for biologists. The lessons include instruction in the mathematics involved in graphing exponential cell growth data as well as presenting the various phases of cell growth. The lessons are in the series: coli, coli2 - coli7.

none;3 hours for series;college/university students

CELL INJURY II: ORGANELLE CHANGES: ACUTE CELL INJURY (cell2;1977;unpublished)
Mergner, Wolfgang; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore

This lesson stresses the biochemical and structural changes in acute cell injury, as well as altered organelles. Mitochondrial changes are discussed in detail and compared to changes in the cytosol, nucleus, lysosol, cell membrane and endoplasmic reticulum. Reaction to cell injury is subdivided into three phases: before, at or after the point-of-no-return.

none;45 minutes;first year medical students

CELL INJURY: INTRO. TO CELL INJURY & CELL DEATH (cellinjury;1976;unpublished)
Mergner, Wolfgang; Bennett, Charles
School of Medicine, Univ. of Maryland, Baltimore

This lesson defines cell injury, distinguishes acute chronic cell injury, defines reversible and irreversible cell injury, and differentiates between the two by defining the "point of no return." The lesson also describes the three factors of ischemic cell injury: anoxia, lack of perfusion, and lack of substrate.

none;15 minutes;first year medical students

RESTING MEMBRANE POTENTIAL (shp21;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas

This lesson reviews the structure and functions of a cell membrane necessary for the establishment of the resting membrane potential. The process of active transport is described in detail and its role in cell function defined.

none;60 minutes;physicians' assistants

Cells--Permeability

RESTING MEMBRANE POTENTIAL (shp21;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson reviews the structure and functions of a cell membrane necessary for the establishment of the resting membrane potential. The process of active transport is described in detail and its role in cell function defined.
none;60 minutes;physicians' assistants

Central nervous system

ALCOHOLISM: A PHARMACOLOGIC OVERVIEW (booze2;1976;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois
The lesson (linear instructional format) is on the pharmacology and toxicology of chronic excess usage of ethanol. Topical areas (indexable) presented include major pharmacologic effects of chronic ingestion of ethanol on major body systems; ethanol tolerance and dependence symptoms of withdrawal from chronic usage; pharmacologic treatments used.
none;30 minutes;first year medical students

CNS PHARMACOLOGY: ANALGESIA REVIEW (kumc32;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses morphine-type analgesic agents.
none;15 minutes;first year medical students

CNS PHARMACOLOGY: ANESTHESIA CASE STUDY (kumc38;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents questions based upon a case history regarding general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: ANESTHESIA QUIZ (kumc30;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson is a quiz on basic principles of general anesthesia and clinically pertinent gaseous anesthetic agents.
none;15 minutes;first year medical students

CNS PHARMACOLOGY: ANTIDEPRESSANT QUIZ (kumc21;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson is a quiz over general principles of depression and clinically pertinent antidepressant agents.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: GENERAL ANESTHESIA (kumc29;1975;unpublished)
Kansas University Medical Center; Nelson, S; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson covers the general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: SEDATIVES AND HYPNOTICS (kumc19;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the general chemistry and pharmacology of sedative-hypnotics. Those treated are primarily barbiturates, certain anithistamines, chloral hydrate, ethchlorvynol, glutethamide, methaqualone and other clinically pertinent sedative-hypnotic agents.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: STIMULANTS AND HALLUCINOGENS (kumc22;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents material on hallucinogenic agents and central nervous system stimulants.
none;10 minutes;first year medical students

CNS PHARM.: ASPIRIN-TYPE ANALGESICS & ANTI-INFLAM. AGENTS (kumc28;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the analgesic and anti-inflammatory effects of salicylates and other aspirin-type agents.
none;20 minutes;first year medical students

DRUGS: ANTI-INFLAMMATORY QUIZ (kumc41;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides a quiz over the anti-inflammatory drug materials presented in the PLATO pharmacology lessons.
none;10 minutes;first year medical students

DRUGS: ANTI-INFLAMMATORY AGENTS - CONSULT (kumc35;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
In this lesson the student serves as a consultant and is asked to answer certain questions concerning the treatment of a patient.
none;15 minutes;first year medical students

DRUGS: DIURETICS QUIZ I (kumc52;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson contains the first of two quizzes on diuretic drugs.
none;15 minutes;first year medical students

DRUGS: DIURETICS QUIZ II (kumc57;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson contains the second of two quizzes on diuretic drugs.
none;30 minutes;first year medical students

DRUGS: LOCAL ANESTHETIC AGENTS (kumc50;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses local anesthetics, their uses and problems.
none;10 minutes;first year medical students

DRUGS: LOCAL ANESTHETIC REVIEW (kumc48;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides a quiz and review of material dealing with local anesthetics.
none;15 minutes;first year medical students

NEUROHUMOR METABOLISM: METAB. PATHS OF PRIMARY NEUROMEDIATOR (nhumor;1975;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois
The lesson provides information regarding the synthesis and degradation of certain primary chemical mediators of the autonomic and central nervous systems, including dopamine, norepinephrine, epinephrine, serotonin, and acetylcholine. A drill and practice section over various structures and pathways is included.
none;25 minutes;first year medical students

THE PHARMACOLOGY OF ETHANOL (booze1;1976;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois
This is a linear instructional lesson on the pharmacology of ethanol. Topical areas include: major effects on the CNS, CVS, GI tract, liver, kidney, and endocrine system: adsorption, distribution, metabolism, and elimination of ethanol.
none;25 minutes;first year medical students

PHARMACOLOGY OF MARIHUANA (mari;1976;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciencec, Univ. of Illinois
This is a linear lesson which presents information regarding the pharmacology of marihuana as text with inserted questions. The information presented includes: patterns of use; biologic disposition; effects; and aspects of tolerance to and physical dependence on marihuana.
none;20 minutes;first year medical students

Cerebrovascular disease

MR. Q'S DILEMMA, OR DIFFERENT STROKES FOR DIFFERENT FOLKS (strokes;1977;unpublished)
Curtis, Brian A; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson in clinical neurology touches on cerebrovascular accidents and the expected course, upper and lower motor neuron lesions, and spinal cord lesions.
touch panel;45-60 minutes;occup. therapy and med. students

STROKE SYNDROME CASE STUDY I (curtiss18;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson presents a case study reviewing the classic findings of a relatively common stroke syndrome.
optional touch panel:10-20 minutes;occup. therapy and med. students

STROKE SYNDROME CASE STUDY II (curtiss21;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson presents a case study review of a very common stroke syndrome of the elderly.
none;5-10 minutes;students of occupational therapy, medical students

Cervix uteri--Cancer

ORAL CONTRACEPTIVES AND NEOPLASIA (ocneo;1979;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the types of epidemiological studies used to investigate the possible relationships between oral contraceptive use and neoplasia. The risk factors for contracting breast, cervical, endometrial, and liver cancer are reviewed, and the results of studies relating oral contraceptive use to the aforementioned cancers are presented.
none;30 minutes;first year medical students/health science students

Chagas' disease

MEDICAL PARASITOLOGY IX: AMERICAN TRYPANOSOMIASIS (tryp2;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson teaches the general morphological characteristics of hemoflagellates, the life cycle, laboratory diagnoses, pathogenicity, symptomatollogy and treatment of Chagas' Disease. The lesson format is linear with textual presentation with inserted questions.

none;35 minutes;first year medical students

Chancroid

THE MICROBIAL BASIS OF VENEREAL DISEASE (veedx;1976;unpublished)
Ehrhardt, Melvin E
School of Basic Medical Sciences, Univ. of Illinois

This lesson provides an introduction to the identification of venereal diseases, including definitions of syphilis, gonorrhea, lymphogranuloma venereum, chancroid and Donovaniasis. Symptoms, signs, manifestations, and diagnostic tests are covered along with preventative treatment for syphilis.

optional microfiche;none;medical students

Chemical bonds

COVALENT BONDING (covalent;1976;unpublished)
Chabay, Ruth
Chemistry Department, University of Illinois

The subject of the lesson is covalent bonding. It discusses electron pair bonds, multiple bonding and the use of Lewis structures to represent covalent bonded compounds. A prerequisite for the lesson is familiarity with the concept of valence electrons and the ability to determine the number of valence electrons for a given element.

none;46 minutes;college/university freshmen

IONIC BONDING (ionic;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois

The lesson deals with the formation and nature of ionic bonds and the use of Lewis Dot structures to represent ionic compounds. The student learns to recognize common types of ionic compounds (acids, bases and salts).

touch panel;27 minutes;college/university students

Chemical elements

ELEMENTS GAME (elements;1974;1977)
Smith S - Chabay R
Chemistry Department, University of Illinois

This is an interterminal game. It is played between two players each at a different terminal. The players compete to see who can correctly provide the names or symbols of more of the elements.

none;open-ended;students in introductory chemistry

NAMES OF SOME COMMON ELEMENTS (ptable2;1976;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.
The student is introduced to the names and symbols of some of the common elements found on the planet earth.
none;37 minutes;college or university students of general chemistry

NAMES OF SOME INORGANIC COMPOUNDS (inom2;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson is an introduction to the names and symbols of some common inorganic compounds. It includes names of some inorganic ions, and names and formulas for acids, oxides, some salts and bases.
none;27 minutes;college/university freshmen

NAMES OF THE ELEMENTS (ptable;1974;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.
The lesson presents drill and practice in the names and symbols of the elements. Chemistry students will find the lesson useful for review.
none;1 hour;college and university students of general chemistry

PROPERTIES OF THE ELEMENTS (delem;1976;1977)
Smith, Stanley
Chemistry Department, U. of Illinois, Urbana IL
The lesson consists of a discussion of the groups of elements, their properties, uses and their relationships in the Periodic Table of the Elements.
none:37 minutes;college/university students of introductory chemistry

Chemical elements--Purification

PURIFICATION BY CRYSTALLIZATION (cry2;1972;1977)
Smith, Stanley
Chemistry Department, University of Illinois
In this lesson, a simulated laboratory experiment, the student is asked to purify a sample of napthalene by recrystallization from methanol. The sample contains both soluble and insoluble impurities. The steps in the purification are outlined and solubility data for napthalene in methyl alcohol is given to aid the student.
none;27 minutes;college/university students

PURIFICATION OF ORG. COMPOUNDS BY CRYSTALLIZATION (crystal;1976,1978;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson reviews some aspects of purification of organic compounds by recrystallization.
none;22 minutes;college/university students

Chemical engineering--Problems, exercises, etc.

CHANGE-OF-PHASE PROBLEMS (che10;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on vapor and saturation problems designed for sophomore stoichiometry students in chemical engineering. There are seven problems with randomized variables.
none;64 minutes;sophomore chemical engineering students

ENTHALPY EFFECTS (che4;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on enthalpy and heats of reactions designed for sophomore stoichiometry students in chemical engineering. There are six different problems with randomized variables. Help is available at almost any point in the lesson.
none;none;sophomore chemical engineering students

FIRST LAW OF THERMODYNAMICS, CLOSED SYSTEMS - PART I (che9;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on the first law of thermodynamics over closed systems, designed for sophomore stoichiometry students in chemical engineering. There are six problems with randomized variables.
none;31 minutes;sophomore chemical engineering students

FIRST LAW OF THERMODYNAMICS, CLOSED SYSTEMS - PART II (che12;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on the first law of thermodynamics designed for sophomore stoichiometry students in chemical engineering. This particular set of six problems involves closed systems which are somewhat more advanced than those in part one. Randomized variables are given.
none;95 minutes;sophomore students of chemical engineering

IDEAL GASES AND REAL FLUIDS - PART I (che11;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is the first of two lessons dealing with the ideal and real gas laws for both pure components and mixtures. The emphasis in this first part is on the van der Waals equation and the Virial equation.
none;97 minutes;sophomore chemical engineering students

IDEAL GASES AND REAL FLUIDS - PART II (che17;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, University of Illinois
This is the second of two lessons dealing with ideal and real gas laws for pure components and mixtures. The emphasis is on the theory of corresponding states as applied to both pure gases and gas mixtures and demonstrates the application of various real gas laws to gas mixtures.
none;55 minutes;sophomore level chemical engineering students

INTRODUCTION TO EQUILIBRIUM STAGES (che14;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, University of Illinois
This lesson is designed to be used either with a chemical engineering stoichiometry class or a unit operations class as an introduction to the concept of equilibrium stage. It includes problems demonstrating the equilibrium stage concept for both vapor-liquid equilibria and liquid-liquid equilibria.
touch panel;55 minutes;college level chemical engineering students

AN INTRODUCTION TO UNITS, SYMBOLS AND REACTION (che15;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on units and reaction in stoichiometry, designed primarily for sophomore chemical engineering students. There are eleven parts, five of which contain problems for practice.
touch panel;74 minutes;sophomore students of chemical engineering

MATERIAL BALANCES WITH CHEMICAL REACTION (ADVANCED) (che6;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems with randomized variables and it is necessary to fill out a mole table for all species listed.
none;52 minutes;sophomore students of chemical engineering

MATERIAL BALANCES WITH CHEMICAL REACTION (BASIC) (che2;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems, each presented with graphic representations. Mole tables must be completed for each one, and help is provided if needed.
none;73 minutes;sophomore chemical engineering students

MATERIAL BALANCES WITHOUT CHEMICAL REACTION (BASIC) (che1;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems, each presented with graphic representations. When needed, detailed help is provided.

none;37 minutes;sophomore chemical engineering students

MATERIAL BALANCES W/O CHEMICAL REACTION (ADVANCED) (che7;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems and for each equation, the student must supply the entire right hand side of the equation to equal the left hand side which will always be zero.

none;34 minutes;sophomore students of chemical engineering

THERMODYNAMIC DIAGRAMS (BASIC) (che8;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on reading thermodynamics diagrams designed for sophomore students in chemical engineering. There are six different problems.

touch panel;35 minutes;sophomore students of chemical engineering

TOTAL ENERGY BALANCE, STEADY STATE - PART I (che16;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is part one of a lesson on steady state energy balance designed for sophomore stoichiometry students in chemical engineering. There are 5 different problems with randomized variables. Help is available at almost any point in the lesson.

none;48 minutes;sophomore chemical engineering students

TOTAL ENERGY BALANCE, STEADY STATE - PART II (che5;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is part two of a lesson on steady state energy balance designed for sophomore stoichiometry students in chemical engineering. There are 5 different problems with randomized variables. Help is available at almost every point.

none;81 minutes;sophomore chemical engineering students

UNSTEADY STATE ENERGY BALANCES (che22;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, University of Illinois
This is a lesson on transient energy balances designed for chemical engineering stoichiometry students at the level of a first chemical engineering course. The lesson allows the student to practice a variety of transient energy balance calculations.
touch panel;40 minutes;first level chemical engineering students

UNSTEADY STATE MATERIAL BALANCES (che18;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, University of Illinois
This lesson on transient material balances is designed for students of stoichiometry at the level of a first chemical engineering course. It provides practice for the student with a variety of unsteady state material balance problems.
touch panel;45 minutes;first level chemical engineering students

Chemical engineering--Statistical methods

DATA ANALYSIS (che13;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on the analysis of data, which are nothing more than a related group of numbers. This data can be useless as a raw numerical set, but by interpretation or restructuring it can be put in a more compact and readable form. In this lesson the user will be shown methods by which data analysis can be accomplished easily and efficiently.
none;23 minutes;sophomore students of chemical engineering

Chemical equations

BALANCING CHEMICAL EQUATIONS (tbal;;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson teaches how to balance chemical equations and drills the students in the technique of equation balancing.
none;26 minutes;college/university students

BALANCING OXIDATION-REDUCTION EQUATIONS (balredox;1975;1977)
Smith, Stanley
Chemistry Department, U. of Illinois, Urbana IL
The lesson introduces the concept of oxidation being a loss in electrons in a chemical reaction and reduction being a gain in electrons. The net transfer of electrons from one substance to another in a reaction being equal, two common methods for balancing equations are shown and problems using each method are given.
touch panel;31 minutes;college/university students

CALCULATIONS USING CHEMICAL EQUATIONS (wtwt;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson gives instruction in elementary stoichiometry and the meaning of chemical equations. Problems are presented involving mole-mole, mole-weight, and weight-weight problems. An on-line calculator is available for use in solving the problems.
none;65 minutes;college/university students

CHEMICAL EQUATIONS (equation;1973;1977)
Grandey, Robert C
Computer-based Educ. Res. Lab., Univ. of Ill.
The lesson teaches the student to balance chemical equations. The copying of the formulas is made easy by the use of a COPY and an EDIT key. The lesson is principally a practice drill in equation technique.
none;none;college/university students of elementary chemistry

CHEM. STOICHIOM. USING BAL. CHEM. EQUATIONS (moleratio;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson teaches the method for solving for an unknown number of moles of a reactant or product using balanced equations. The method is presented and is followed by problems.
none;10 minutes;students of general chemistry

HOW TO WRITE EQUATIONS FOR NET IONIC REACTIONS (ions;1977;unpublished)
Moore, Carolynn
Chemistry Dept., Univ. of Illinois, Urbana, IL
The lesson introduces some of the properties of Ionic Compounds, chemical compounds made up of ions.
none;none;college and university students of general chemistry.

Chemical equilibrium

CHEMICAL EQUILIBRIUM (keq;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
This lesson leads the student through a tutorial dialog in which a non-chemical system is used as an example to define equilibrium, define K_{eq}, and illustrate Le Chatelier's principle. Not much mathematical calculation is required.
none;32 minutes;college/university students

EQUILIBRIUM PROBLEMS II: K_a, K_b, AND pH (equil2;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson emphasizes the relations between K_{eq}, K_a, or K_b. The problems involve the calculation of acid-base equilibrium concentrations, pH and equilibrium constants.
none;20 minutes;students of general chemistry

EQUILIBRIUM PROBLEMS I: RELATION OF K_{eq} AND CHEM. EQUIL. (equil;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson consists of practice problems on chemical equilibrium.
none;16 minutes;students of introductory chemistry

POTENTIOMETRIC DETERMINATION OF K_{sp}, PART I (vuksp;1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is designed for students in quantitative analysis. It introduces the basic concepts of potentiometric measurements of an equilibrium constant and the use of activities in calculations. The purpose of the lesson is to prepare the student for a laboratory experiment.
none;60 minutes;chemistry students of quantitative analysis

POTENTIOMETRIC DETERMINATION OF K_{sp}, PART II (vukspl;1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is a continuation of lesson "vuksp" (Potentiometric Determination of K_{sp}, Part I). It is designed to treat the data obtained in a typical laboratory experiment. The data may be obtained directly from the program (and access to the program may be restriced) or from actual laboratory data.
none;30 minutes;chemistry students of quantitative analysis

Chemical models

General chemistry

ATOMS AND ATOMIC MASSES (dalton;1973;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
An historical introduction to atomic theory is presented in this lesson.
none;31 minutes ;college/university students

ELECTRONIC STRUCTURE OF ATOMS: THE AUFBAU PRINCIPLE (atom3;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson is an introduction to the electronic structure of atoms. It is a prerequisite to the understanding of chemical reactions and the principles of chemical bonding. The construction of orbital occupation diagrams for elements other than rare earths is presented.
touch panel;35 minutes;college/university freshmen

ELECTRONIC STRUCTURE OF ATOMS: WRITING ELECTR. CONFIG. (atom4; 1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson teaches the student the process of writing out the electronic configuration of atoms by merely looking at the periodic table.
touch panel;38 minutes;college/university students

STRUCTURE OF ATOMS PART I: ATOMIC NUMBER AND MASS (atom1;1975;)
Chabay, Ruth
Chemistry Department, University of Illinois
The concepts of atomic number and atomic mass are important in understanding many chemical ideas. This lesson covers the basic composition of atoms (protons, neutrons, and eletrons), atomic number and atomic mass. The concept of gram-atomic weight (mole) is also introduced.
none;31 minutes;college/university students

STRUCTURE OF ATOMS: VALENCE ELECTRONS (atom2;1975;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson teaches the student how to determine the number of valence electrons in an element by finding it in the periodic table and how the number of valence electrons determines what ions are commonly formed by an element.
touch panel;19 minutes;college/university students

Organic chemistry

CONFORMATIONAL REPRESENTATION OF ORGANIC COMPOUNDS (conform;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The program introduces three dimensional representation of the structure of carbon compounds: conformations of ethane, propane, and butane, energy barriers to rotations about single bonds, and Newman projection formulas.
none;24 minutes;college/university students

DRAWING KEKULE' STRUCTURES OF ARENES (kekule;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson deals with drawing Kekule' structures of arenes. The student indicates, by touching the screen, the positions of the double bonds in five different areas.
touch panel;60 minutes;college/university students

DRAWING STRUCTURAL FORMULAS (nomt;1976;1977)

Smith, Stanley

Chemistry Department, University of Illinois

The lesson gives students practice in constructing the structural formulas of a variety of compounds from their names. It is emphasized that structural formulas are a better guide to the chemical and physical properties of compounds than are the names of the compounds.

touch panel;none;college/university students

STRUCTURE AND CONFORMATION OF CYCLOALKANES (cyclo;1976;1977)

Smith, Stanley

Chemistry Department, University of Illinois

This lesson deals with nomenclature and conformations of some common cycloalkanes. It includes three dimensional representation of molecules, conformation of ethane, propane and butane, energy barriers to rotations about single bonds and Newman projection formulas.

none;24 minutes;college/university students

Chemical reaction, Conditions and laws of

ENTHALPY EFFECTS (che4;1977;unpublished)

Oberle, Timothy T; Eckert, Charles A

Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on enthalpy and heats of reactions designed for sophomore stoichiometry students in chemical engineering. There are six different problems with randomized variables. Help is available at almost any point in the lesson.

none;none;sophomore chemical engineering students

INTRODUCTION TO EQUILIBRIUM STAGES (chel4;1978;unpublished)

Oberle, Timothy T; Eckert, Charles A

Dept. of Chemical Engineering, University of Illinois

This lesson is designed to be used either with a chemical engineering stoichiometry class or a unit operations class as an introduction to the concept of equilibrium stage. It includes problems demonstrating the equilibrium stage concept for both vapor-liquid equilibria and liquid-liquid equilibria.

touch panel;55 minutes;college level chemical engineering students

AN INTRODUCTION TO UNITS, SYMBOLS AND REACTION (chel5;1978;unpublished)

Oberle, Timothy T; Eckert, Charles A

Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on units and reaction in stoichiometry, designed primarily for sophomore chemical engineering students. There are eleven parts, five of which contain problems for practice.

touch panel;74 minutes;sophomore students of chemical engineering

MATERIAL BALANCES WITH CHEMICAL REACTION (ADVANCED) (che6;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems with randomized variables and it is necessary to fill out a mole table for all species listed.
none;52 minutes;sophomore students of chemical engineering

MATERIAL BALANCES WITH CHEMICAL REACTION (BASIC) (che2;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems, each presented with graphic representations. Mole tables must be completed for each one, and help is provided if needed.
none;73 minutes;sophomore chemical engineering students

MATERIAL BALANCES WITHOUT CHEMICAL REACTION (BASIC) (che1;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems, each presented with graphic representations. When needed, detailed help is provided.
none;37 minutes;sophomore chemical engineering students

MATERIAL BALANCES W/O CHEMICAL REACTION (ADVANCED) (che7;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems and for each equation, the student must supply the entire right hand side of the equation to equal the left hand side which will always be zero.
none;34 minutes;sophomore students of chemical engineering

TOTAL ENERGY BALANCE, STEADY STATE - PART I (che16;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is part one of a lesson on steady state energy balance designed for sophomore stoichiometry students in chemical engineering. There are 5 different problems with randomized variables. Help is available at almost any point in the lesson.
none;48 minutes;sophomore chemical engineering students

TOTAL ENERGY BALANCE, STEADY STATE - PART II (che5;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is part two of a lesson on steady state energy balance designed for sophomore stoichiometry students in chemical engineering. There are 5 different problems with randomized variables. Help is available at almost every point.
none;81 minutes;sophomore chemical engineering students

UNSTEADY STATE ENERGY BALANCES (che22;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, University of Illinois
This is a lesson on transient energy balances designed for chemical engineering stoichiometry students at the level of a first chemical engineering course. The lesson allows the student to practice a variety of transient energy balance calculations.
touch panel;40 minutes;first level chemical engineering students

UNSTEADY STATE MATERIAL BALANCES (che18;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, University of Illinois
This lesson on transient material balances is designed for students of stoichiometry at the level of a first chemical engineering course. It provides practice for the student with a variety of unsteady state material balance problems.
touch panel;45 minutes;first level chemical engineering students

ΔH LAW OF HESS (enthalpy;1976;1977)
Ghesquiere, James R
Comp.-based Educ. Res. Lab., CERL, Univ. of Ill.
This lesson discusses endothermic and exothermic chemical reactions, and teaches the student how to add equations to determine the enthalpy of a reaction.
none;37 minutes;college/university students

Chemical reaction, Rate of

ENZYME KINETICS: ALLOSTERIC CONTROL (menz4;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson explains the structure and function of allosteric enzymes in general, and the structure and function of intercellular process, in particular.
none;25 minutes;first year medical students

ENZYME KINETICS: INTERACTIVE GRAPHICS (menz2;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
In this lesson the quantitative nature of enzyme catalyzed reactions is displayed graphically. The various parameters may be altered (i.e., substrate concentration, inhibitor concentration, Km, Vmax) and the effects on the kinetics of the reaction can be observed. Problems concerning both simple and inhibitor kinetics are presented to the student.
none;25 minutes;first year medical students

ENZYME KINETICS: INTRODUCTION (menz3;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Health Sciences, Univ. of Illinois
This lesson reviews the derivation of the Michaelis-Menton equation. It defines and explains the relationships among substrate concentration, reaction, velocity, Km and Kmax.
none;25 minutes;first year medical students

REACTIONS OF ALDEHYDES AND KETONES (PART 2) (ketone2;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson continues the discussions of reactions of aldehydes and ketones.The subjects include enolization, H-D exchange, halogenation of ketones, and aldol condensation reactions with appropriate problems.
none;55 mminutes;college/university students

Chemical reactions

ACID BASE REACTIONS: PRACTICE PROBLEMS (abprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson consists of a series of practice problems on acid-base reactions.
touch panel;13 minutes;college/ university freshmen

ACID-BASE TITRATION (phcurves;1972;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson presents the calculation of H^+ and pH, the titration of weak acids and the titration of diprotic weak acids.
none;17 minutes;students of general chemistry

ACID-BASE TITRATIONS (titrate2;1976;1977)
Smith, Stanley
Department of Chemistry, Univ. of Illinois
The lesson is comprised of a simulated acid-base titration experiment in which the student measures the concentration of a solution of NaOH by titration of a weighed sample of potassium acid phthalate. The solution of NaOH is then used to determine the molecular weight of an unknown acid.
none;20 minutes;college/university students

ALKENE CHEMISTRY (alkenet;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson on alkene chemistry discusses the structure, nomenclature, hydrogenation, bromination and hydroboration of alkenes, and includes animations of and simulated experiments on alkene reactions.
touch panel;44 minutes;college/university students

AROMATIC SYNTHESIS GAME (areneg;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This is an interterminal game for two persons. One player makes up a compound for another player to synthesize. If the player fails to make the compound, the namer of the compound has to synthesize it himself. The first person to prepare five compounds wins the game.
none;open-ended;college/university students of organic chemistry

CHEMICAL EQUATIONS (equation;1973;1977)
Grandey, Robert C
Computer-based Educ. Res. Lab., Univ. of Ill.
The lesson teaches the student to balance chemical equations. The copying of the formulas is made easy by the use of a COPY and an EDIT key. The lesson is principally a practice drill in equation technique.
none;none;college/university students of elementary chemistry

CHEMICAL EQUILIBRIUM (keq;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
This lesson leads the student through a tutorial dialog in which a non-chemical system is used as an example to define equilibrium, define K_{eq}, and illustrate Le Chatelier's principle. Not much mathematical calculation is required.
none;32 minutes;college/university students

ESTERS OF CARBOXYLIC ACID (esters;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson is on the preparation and reactions of esters. Experiments are simulated to determine the mechanism of esterification, labeled oxygen exchange and hydrolysis.
none;28 minutes;college/university students

FREE RADICAL HALOGENATION REACTIONS (radical;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson illustrates the mechanism of free radical chlorination and bromination of alkanes and shows how to calculate the heats of reactions from bond energies.
none;57 minutes;college/university students

THE GREAT SYNTHESIS RACE (syng;1973;1977)
Smith S - Chabay R
Chemistry Department, University of Illinois
This is a multistep synthesis game in which two players race to perform a multistep aliphatic synthesis from randomly chosen materials. There are a mono ("syng") and a two-terminal ("syng2") version of the game. The synthesis involves the use of Grignard reactions and simple alcohol-carbonyl group interconversions.
none;66 minutes;college/university students

IDENTIFICATION OF AN UNKNOWN ORGANIC COMPOUND (quals;1975;unpublished)
Smith, Stanley
Chemistry Department, University of Illinois
Practice is given in this lesson in the identification of unknown organic compounds using a limited set of test reagents. Review of the description of any of the tests is permitted as well as the trial of the test on a known compound. Four correct identifications are required to complete the lesson.
none;119 minutes;college/university students

INTRODUCTION TO TITRATIONS (ititm2;1977;1978)
Smith S - Chabay R
Chemistry Department, Univ. of Ill., Urbana, Ill.
The lesson introduces the students to the equations, calulations, and experimental techniques involved in performing titration experiments.
microfiche;52 minutes;college/university students

KINETICS AND MECHANISM OF SEMICARBAZONE FORMATION (carbazone;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson is an advanced one on the formation of a semicarbazone. Each student is required to set up conditions, run, and calculate rate constants for various substituted benzaldehydes in both acid and alkaline medium, and make appropriate rate profile plots and data explanations.
none;80 minutes;advanced students of college/university organic chemistry

MULTISTEP ALIPHATIC SYNTHESIS (isyn;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson deals with the interconversion of simple organic compounds. Some approaches to multistep synthesis are outlined using Grignard reactions.Students must prepare several compounds by indicating reagents for each step with the computer drawing the structure of the product.
none;53 minutes;college/university students

MULTISTEP AROMATIC SYNTHESIS (opta;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson gives the student the opportunity to designate the steps in an electrophilic aromatic substitution reaction experiment. The student indicates the sequence of reactions to prepare benzene derivatives by supplying the reagent and the computer draws the structure of the product.
none;39 minutes;college/university students

PREPARATION AND REACTIONS OF ALCOHOLS: PRAC. PROBLEMS (rohprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The student is given practice problems to solve associated with the preparation and reactions of alcohols.
touch panel;29 minutes;college/ university students

PREPARATION AND REACTIONS OF ALKENES (eneprob;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
Practice problems are presented for reactions associated with the preparation and additions to alkenes. The student is given a group of compounds and reagents and must find interconversions between them by touching the corresponding reactant, reagent and product.
touch panel;28 min;college/ university students

PREPARATION AND REACTIONS OF AMINES (amines;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
Preparation and reactions of amines with problems.
none;none;college/university students

PREPARATION AND REACTIONS OF AMINES - PRAC. PROBLEMS (amineprob;1976;1978)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson gives the student practice in using some of the reactions associated with the preparation and reactions of aliphatic amines.
touch panel;20 minutes;college/university students

PREP. AND REACT.: ACID CHLORIDES, ESTERS, ANHYDRIDES, AMIDES (rcocl;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a review of the reactions involved in the formation of acid chlorides, esters, anhydrides and amides and then numerous practice problems for the student on these derivatives of carboxylic acids.
none;56 minutes;college/university students

QUALITATIVE ORGANIC ANALYSIS (qual;1972;1978)
Smith, Stanley
Chemistry Department, Univ. of Ill., Urbana, Ill.
In this lesson the student is asked to identify nine unknown compounds by asking questions about the results of laboratory experiments on the compound. Questions can be asked about physical and spectroscopic properties and about chemical reactions. The demonstration program, quald, involves the identification of only one compound.
microfiche (not needed by "quald");119 minutes;college/university students

QUALITATIVE ORGANIC ANALYSIS-REVIEW OF REACTIONS & TESTS (introq;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lessons review some of the classification reactions and tests for organic functional groups. Practice problems for interpretation of the test results are included.
none;52 minutes;college/ university students

SUBSTITUTION AND ELIMINATION (sn2t;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The student explores the effects of the structure of alkyl halide and the effect of alkoxide concentration on the rates of these reactions and on the ratio of substitution to elimination.
none;43 minutes;college/university students

SUBSTITUTION AND ELIMINATION REACTIONS - PRACTICE PROBLEMS (subprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson allows the student to practice substitution and elimination reactions. The lesson can only be used with a touch panel. The student is asked to indicate, by touching the appropriate spot on the screen, the starting materials, reagents and products for the reactions.
touch panel;33 minutes;college/university students

Chemical tests and reagents

FRAKIONIERTES DESTILLATIONSEXPERIMENT (gdistill;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is written in German. The program provides a simulation of a fractional distillation of a 50:50 mixture of pentane and hexane in which the student assembles the apparatus and runs the distillation by controlling the temperature of the heating bath. The object of the experiment is to obtain 40 ml. of each compound with 95% purity.
touch panel;15 minutes;college/university students

IDENTIFICATION OF AN UNKNOWN ORGANIC COMPOUND (quals;1975;unpublished)
Smith, Stanley
Chemistry Department, University of Illinois

Practice is given in this lesson in the identification of unknown organic compounds using a limited set of test reagents. Review of the description of any of the tests is permitted as well as the trial of the test on a known compound. Four correct identifications are required to complete the lesson.

none;119 minutes;college/university students

QUALITATIVE ORGANIC ANALYSIS (qual;1972;1978)
Smith, Stanley
Chemistry Department, Univ. of Ill., Urbana, Ill.

In this lesson the student is asked to identify nine unknown compounds by asking questions about the results of laboratory experiments on the compound. Questions can be asked about physical and spectroscopic properties and about chemical reactions. The demonstration program, quald, involves the identification of only one compound.

microfiche (not needed by "quald");119 minutes;college/university students

QUALITATIVE ORGANIC ANALYSIS-REVIEW OF REACTIONS & TESTS (introq;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lessons review some of the classification reactions and tests for organic functional groups. Practice problems for interpretation of the test results are included.

none;52 minutes;college/ university students

Chemistry
see Chemistry, Analytic

Chemistry
see Chemistry, General

Chemistry
see Chemistry, Inorganic

Chemistry
see Chemistry, Organic

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Chemistry
see Chemistry, Physical

Chemistry, Analytic--Qualitative

DETER. OF PERCENT OXYGEN IN AN UNKNOWN SAMPLE (lpcomp;1977;unpublished)
Moore, Carolynn
Chenistry Dept., Univ. of Illinois, Urbana, IL
The lesson offers a simulated experiment in which the student can analyze the percent composition of a chemical compound. The student can also do an analysis of the percentage of one element in a compound composed of several elements.
none;none;college or university students of general chemistry

INTERPRETATION OF MASS SPECTRA (ms;1975;unpublished)
Murov, Steven L
Moorhead State University, Moorhead, Minnesota
The lesson presents the basic principles involved in mass spectrometry, takes the student through the stepwise analysis of four unknowns and then requires the student to carry out a stepwise analysis of an unknown which is a randomly selected substance.
none;none;college and university students of analytic chemistry

PROPERTIES OF MATTER: SPECIFIC HEAT (calorie;1977;unpublished)
Moore, Carolynn
Chemistry Dept., Univ. of Illinois, Urbana, IL
The student is taught in this lesson to do a simulated experiment in which the specific heat of an unknown piece of metal is measured. The identity of the metal is determined from the knowledge gained of the value of its specific heat.
none;none;college or university students of general chemistry

SEPARATION OF CATIONS FROM SOLUTION (iqual;1973;unpublished)
Francis, Larry D
Computer-based Educ. Res. Lab., Univ. of Illinois
The lesson presents a simulated laboratory exercise to the student. He is given a mixture of four ions in the same test tube and is required to separate these into four test tubes by selective precipitation. He may review materials on the concepts of precipitation and access descriptions of reagents to gain information for appropriate test selections.
none;none;college/university students

Chemistry, Analytic--Quantitative

ACID - BASE TITRATIONS (vucurve;1978;unpublished)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is designed for students in quantitative analysis. It introduces the aspects of acid/base titration curves and the variables which determine the shape of the curves. Both monorotic and diprotic acids are covered along with an introduction to weak bases.
none;60 minutes;chemistry students studying quantitative analysis

BASIC GAS CHROMATOGRAPHY (vuchrom;1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is designed to teach the basic concepts of gas chromatography. It can be used by students in any course where the gas chromatograph is used. The lesson teaches the basic nomenclature and operating paramters for a gas chromatograph.
none;60 minutes;students of analytic chemistry

INTRODUCTION TO BEER'S LAW (vuspec; 1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is designed for students in quantitative analysis. It introduces Beer's Law and contains a selection of typical problems. The lesson starts with the basic requirements necessary to absorb radiant energy through the analysis of a two component mixture.
none;45 minutes;chemistry students studying quantitative analysis

ION SELECTIVE ELECTRODES (vuise;1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is designed for students in quantitative analysis. It introduces the concepts of ion selective electrodes and describes how the various types of electrodes work.
none;45 minutes;chemistry students of quantitative analytic chemistry

POTENTIOMETRIC DETERMINATION OF K_{sp}, Part I (vuksp 1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is designed for students in quantitative analysis. It introduces the basic concepts of potentiometric measurements of an equilibrium constant and the use of activities in calculations. The purpose of the lesson is to prepare the student for a laboratory experiment.
none;60 minutes;chemistry students of quantitative analysis

POTENTIOMETRIC DETERMINATION OF K_{sp}, Part II (vukspl;1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is a continuation of lesson "vuksp" (Potentiometric Determination of K_{sp}, Part I). It is designed to treat the data obtained in a typical laboratory experiment. The data may be obtained directly from the program (and access to the program may be restriced) or from actual laboratory data.
none;30 minutes;chemistry students of quantitative analysis

Chemistry, Clinical

AUTOMATED CHEM II: INTRODUCTION TO THE SMA 12/60 (sma12;1978;unpublished)
Przepiorka, Donna; Ressler, Newton; Law, Ricky M
Abraham Lincoln Medical School, Univ. of Illinois
The purpose of this lesson is to acquaint the student with the SMA 12/60 laboratory test. It is similar in design and format to PLATO lesson "Automated Chem I: Introduction to the SMA 6/60."
microfiche;30 minutes;medical students and students of medical technology

AUTOMATED CHEM I: INTRODUCTION TO THE SMA 6/60 (sma660;1978;unpublished)
Przepiorka, Donna; Ressler, Newton; Law, Ricky M
Abraham Lincoln Medical School, Univ. of Illinois
The purpose of this lesson is to acquaint the student with the usefulness and limitations of the SMA 6/60. A modicum of knowledge of basic pathophysiology is necessary to analyze the data presented. The program emphasizes the sources of technical error as well as special methods of analysis. Clinical case studies are included.
microfiche;30 minutes;medical students and students of medical technology

Chemistry, Clinical--Examinations, questions, etc.

CLINICAL CHEMISTRY COMPREHENSIVE EXAM. PART I (bbcarle1;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson provides a self-assessment exam for laboratory technology students covering clinical chemistry, instrumentation, equipment, mathematics, carbohydrates and lipids.
optional touch panel;open-ended;students of laboratory technology

CLINICAL CHEMISTRY COMPREHENSIVE EXAM. PART II (bbcarle2;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson provides a self-assessment exam for laboratory technology students in clinical chemistry covering liver function, endocrinology, protein and non-protein nitrogen, enzymes, electrolytes and acid/base.
optional touch panel;open-ended;students of laboratory technology

Chemistry, General

Acid-base chemistry

ACID-BASE TITRATION (phcurves;1972;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson presents the calculation of H^+ and pH, the titration of weak acids and the titration of diprotic weak acids.
none;17 minutes;students of general chemistry

ACID-BASE TITRATIONS (titrate2;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson is comprised of a simulated acid-base titration experiment in which the student measures the concentration of a solution of NaOH by titration of a weighed sample of potassium acid phthalate. The solution of NaOH is then used to determine the molecular weight of an unknown acid.
none;20 minutes;college/university students

INTRODUCTION TO TITRATIONS (ititm2;1977;1978)
Smith S - Chabay R
Chemistry Department, Univ. of Ill., Urbana, Ill.
The lesson introduces the students to the equations, calulations, and experimental techniques involved in performing titration experiments.
microfiche;52 minutes;college/university students

Balancing equations, Stoichiometry

CHEM. STOICHIOM. USING BAL. CHEM. EQUATIONS (moleratio;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson teaches the method for solving for an unknown number of moles of a reactant or product using balanced equations. The method is presented and is followed by problems.
none;10 minutes;students of general chemistry

Basic tools

CONVERSION FACTORS AND DIMENSIONAL ANALYSIS (dimanal;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson instructs in the techniques of problem-solving by dimensional analysis and the use of conversion factors. Dimensional analysis allows the solution of problems by merely looking at the units involved, setting up conversion factors and converting quantities from one set of units to another.
touch panel;35 minutes;college/university students

DIAGNOSTIC QUIZ ON MATH SKILLS FOR CHEMISTRY (mathskills;1977;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson provides the student with a diagnostic review of mathematical skills necessary for use in the study of chemistry. The quiz consists of 16 problems which are graded. The student can go back over the problems after completion in order to study the errors. A four line calculator is provided to assist in the solutions. No instruction.
none;26 minutes;college/university students

THE METRIC SYSTEM (liter;1975;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson introduces units of length, mass, volume, temperature. Emphasis is placed on conversion both within the metric system (eg liters to ml) and from English to metric unit. Dimensional analysis is stressed. An attempt is made to give a feeling for metric units.
none;58 minutes;college/university freshmen

SCIENTIFIC NOTATION (scinot;1975;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson explains the use of scientific notation in ordinary mathematical operations and presents problems for the student in exponential notation, writing large and small numbers and handling multiplication and division in scientific notation.
none;44 minutes;college/univ./high school

Chemical bonding

CALCULATION OF MOLECULAR WEIGHTS (moles;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson presents practice problems on molecular weights and moles.
none;17 minutes;students of introductory chemistry

COVALENT BONDING (covalent;1976;unpublished)
Chabay, Ruth
Chemistry Department, University of Illinois
The subject of the lesson is covalent bonding. It discusses electron pair bonds, multiple bonding and the use of Lewis structures to represent covalent bonded compounds. A prerequisite for the lesson is familiarity with the concept of valence electrons and the ability to determine the number of valence electrons for a given element.
none;46 minutes;college/university freshmen

IONIC BONDING (ionic;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson deals with the formation and nature of ionic bonds and the use of Lewis Dot structures to represent ionic compounds. The student learns to recognize common types of ionic compounds (acids, bases and salts).
touch panel;27 minutes;college/university students

MOLECULAR FORMULAS AND PERCENT COMPOSITION (pcomp;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The purpose of the lesson is to teach the student the concept of moles, atomic weight, molecular weight, empirical formula and molecular formula. After each concept is explained and illustrated, problems are given for the student to solve.
none;83 minutes;college/university students

Chemical equations, Stoichiometry

BALANCING CHEMICAL EQUATIONS (tbal;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson teaches how to balance chemical equations and drills the students in the technique of equation balancing.
none;26 minutes;college/university students

BALANCING OXIDATION-REDUCTION EQUATIONS (balredox;1975;1977)
Smith, Stanley
Chemistry Department, U. of Illinois, Urbana IL
The lesson introduces the concept of oxidation being a loss in electrons in a chemical reaction and reduction being a gain in electrons. The net transfer of electrons from one substance to another in a reaction being equal, two common methods for balancing equations are shown and problems using each method are given.
touch panel;31 minutes;college/university students

CALCULATIONS USING CHEMICAL EQUATIONS (wtwt;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson gives instruction in elementary stoichiometry and the meaning of chemical equations. Problems are presented involving mole-mole, mole-weight, and weight-weight problems. An on-line calculator is available for use in solving the problems.
none;65 minutes;college/university students

Chemical equilibrium

CHEMICAL EQUILIBRIUM (keq;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
This lesson leads the student through a tutorial dialog in which a non-chemical system is used as an example to define equilibrium, define K_{eq}, and illustrate Le Chatelier's principle. Not much mathematical calculation is required.
none;32 minutes;college/university students

EQUILIBRIUM PROBLEMS II: K_a, K_b, AND pH (equil2;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson emphasizes the relations between K_{eq}, K_a, or K_b. The problems involve the calculation of acid-base equilibrium concentrations, pH and equilibrium constants.
none;20 minutes;students of general chemistry

EQUILIBRIUM PROBLEMS I: RELATION OF K_{eq} AND CHEM. EQUIL. (equil;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson consists of practice problems on chemical equilibrium.
none;16 minutes;students of introductory chemistry

Elements and atoms

ATOMS AND ATOMIC MASSES (dalton;1973;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
An historical introduction to atomic theory is presented in this lesson.
none;31 minutes ;college/university students

CHEMICAL EQUATIONS (equation;1973;1977)
Grandey, Robert C
Computer-based Educ. Res. Lab., Univ. of Ill.
The lesson teaches the student to balance chemical equations. The copying of the formulas is made easy by the use of a COPY and an EDIT key. The lesson is principally a practice drill in equation technique.
none;none;college/university students of elementary chemistry

ELECTRONIC STRUCTURE OF ATOMS: THE AUFBAU PRINCIPLE (atom3;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson is an introduction to the electronic structure of atoms. It is a prerequisite to the understanding of chemical reactions and the principles of chemical bonding. The construction of orbital occupation diagrams for elements other than rare earths is presented.
touch panel;35 minutes;college/university freshmen

ELECTRONIC STRUCTURE OF ATOMS: WRITING ELECTR. CONFIG. (atom4; 1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson teaches the student the process of writing out the electronic configuration of atoms by merely looking at the periodic table.
touch panel;38 minutes;college/university students

ELEMENTS GAME (elements;1974;1977)
Smith S - Chabay R
Chemistry Department, University of Illinois

This is an interterminal game. It is played between two players each at a different terminal. The players compete to see who can correctly provide the names or symbols of more of the elements.

none;open-ended;students in introductory chemistry

NAMES OF SOME COMMON ELEMENTS (ptable2;1976;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.

The student is introduced to the names and symbols of some of the common elements found on the planet earth.

none;37 minutes;college or university students of general chemistry

NAMES OF SOME INORGANIC COMPOUNDS (inom2;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson is an introduction to the names and symbols of some common inorganic compounds. It includes names of some inorganic ions, and names and formulas for acids, oxides, some salts and bases.

none;27 minutes;college/university freshmen

NAMES OF THE ELEMENTS (ptable;1974;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.

The lesson presents drill and practice in the names and symbols of the elements. Chemistry students will find the lesson useful for review.

none;1 hour;college and university students of general chemistry

PROPERTIES OF THE ELEMENTS (delem;1976;1977)
Smith, Stanley
Chemistry Department, U. of Illinois, Urbana IL

The lesson consists of a discussion of the groups of elements, their properties, uses and their relationships in the Periodic Table of the Elements.

none;37 minutes;college/university students of introductory chemistry

STRUCTURE OF ATOMS: VALENCE ELECTRONS (atom2;1975;1977)
Chabay, Ruth
Chemistry Department, University of Illinois

The lesson teaches the student how to determine the number of valence electrons in an element by finding it in the periodic table and how the number of valence electrons determines what ions are commonly formed by an element.

touch panel;19 minutes;college/university students

Laboratory techniques

DETERMINATION OF THE ACTIVITY OF THE HALOGENS (halogen;1977;unpublished)
Moore, Carolynn
Dept. of Chemistry, Univ. of Illinois, Urbana, IL
The lesson discusses the activity of the halogen elements. A simulation is given of the laboratory determination of the relative activity of the halogens.
none;none;college and university students of general chemistry

DETER. OF PERCENT OXYGEN IN AN UNKNOWN SAMPLE (lpcomp;1977;unpublished)
Moore, Carolynn
Chenistry Dept., Univ. of Illinois, Urbana, IL
The lesson offers a simulated experiment in which the student can analyze the percent composition of a chemical compound. The student can also do an analysis of the percentage of one element in a compound composed of several elements.
none;none;college or university students of general chemistry

PROPERTIES OF MATTER: SPECIFIC HEAT (calorie;1977;unpublished)
Moore, Carolynn
Chemistry Dept., Univ. of Illinois, Urbana, IL
The student is taught in this lesson to do a simulated experiment in which the specific heat of an unknown piece of metal is measured. The identity of the metal is determined from the knowledge gained of the value of its specific heat.
none;none;college or university students of general chemistry

A SIMULATION OF AN ANALYTICAL BALANCE (balance;1977;unpublished)
Moore, Carolynn
Chemistry Department, University of Illinois
This lesson is a simulation of an analytical balance. It provides the student with the opportunity to practice weighing samples.
touch panel;none;college/university students of elementary chemistry

USING THE BALANCE (weight;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson describes a common type of chemical balance, the Mettler Balance. Practise problems in reading the balance are presented.
microfiche;34 minutes;college/university students of elementary chemistry

Net ionic equations

HOW TO WRITE EQUATIONS FOR NET IONIC REACTIONS (ions;1977;unpublished)
Moore, Carolynn
Chemistry Dept., Univ. of Illinois, Urbana, IL
The lesson introduces some of the properties of Ionic Compounds, chemical compounds made up of ions.
none;none;college and university students of general chemistry.

Nomenclature

CHEMICAL NOMENCLATURE - COMPOUNDS WITH MULTIVALENT CATIONS (chemnom4;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
The final lesson in the series on Chemical Nomenclature is on naming compounds with multivalent cations. This lesson like the others contains practice problems.
none;none;college/university students

CHEMICAL NOMENCLATURE - NAMING ACIDS AND BASES (chemnom3;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
This is the second lesson in the series of lessons on Chemical Nomenclature. This lesson involves naming acids and bases.
none;none;college/university students

CHEMICAL NOMENCLATURE - NAMING IONS AND SALTS (chemnom2;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
This is the first in the series of separate lessons on Chemical Nomenclature. This lesson involves the naming of cations, anions, polyatomic ions and salts.
none;none;college/university students

INORGANIC NOMENCLATURE (chemnom;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
The lesson gives instruction in how to name some chemical compounds (ions, salts, acids, and multivalent cations). Practice drills are included. All the material is in one lesson. Similar material by the same author is divided into three lessons which are described separately.
none;39 minutes;college/university students of beginning chemistry

Solutions

MOLECULAR WEIGHT DETERMINATION BY FREEZING POINT METHOD (freeze;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson teaches the theory of freezing point depression when a solute is added to a solvent, and then the student performs a simulated experiment on the freezing point depression of benzene solutions.
none;81 minutes;students of general chemistry

SOLUTIONS -- CONCENTRATION (conc;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois

The lesson deals with the use of units of concentration (dimensional analysis) in quantitative chemical work where most chemical reactions take place in solutions. Problems of increasing difficulty are presented particularly the kinds of problem common in chemistry laboratories.

none;46 minutes;college/university students

The gas laws

BEHAVIOR OF GASES (shp63;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas

This lesson discusses the properties of gases and their measurement and the pressure, volume and temperature relationships.

none;60 minutes;physicians' assistants

PROPERTIES OF IDEAL GASES (gaslaws;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson deals with the relationship between the pressure that gas exerts on the walls of a container and its temperature, volume, and number of moles of gas in the container. It provides the experimental derivation of the ideal gas laws.

touch panel;67 minutes;college/university chemistry students

PV=NRT, SOLVING PROBLEMS USING THE IDEAL GAS LAW (pvnrt;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois

The lesson teaches the student how to solve problems using the ideal gas law, PV=nRT. It is assumed that the student knows how to solve simple mathematical equations for any value of each variable and to use units correctly including the conversion between units, but a quick review of the necessary algebra for the required manipulation is given.

touch panel;24 minutes;college/university students

SOLVING IDEAL GAS LAW PROBLEMS: CHANGING CONDITIONS (pvt;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois

In this lesson the student practices calculating the final values of the variables in the ideal gas law equation when the initial conditions are given and there are changes in the variables. Boyles' and Charles' Laws are presented and problems involving those laws are also included.

touch panel;17 minutes;college/university students

Chemistry, General--Problems, exercises, etc.

ACID BASE REACTIONS: PRACTICE PROBLEMS (abprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson consists of a series of practice problems on acid-base reactions.
touch panel;13 minutes;college/ university freshmen

BALANCING CHEMICAL EQUATIONS (tbal;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson teaches how to balance chemical equations and drills the students in the technique of equation balancing.
none;26 minutes;college/university students

BALANCING OXIDATION-REDUCTION EQUATIONS (balredox;1975;1977)
Smith, Stanley
Chemistry Department, U. of Illinois, Urbana IL
The lesson introduces the concept of oxidation being a loss in electrons in a chemical reaction and reduction being a gain in electrons. The net transfer of electrons from one substance to another in a reaction being equal, two common methods for balancing equations are shown and problems using each method are given.
touch panel;31 minutes;college/university students

CALCULATION OF MOLECULAR WEIGHTS (moles;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson presents practice problems on molecular weights and moles.
none;17 minutes;students of introductory chemistry

CALCULATIONS USING CHEMICAL EQUATIONS (wtwt;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson gives instruction in elementary stoichiometry and the meaning of chemical equations. Problems are presented involving mole-mole, mole-weight, and weight-weight problems. An on-line calculator is available for use in solving the problems.
none;65 minutes;college/university students

EQUILIBRIUM PROBLEMS II: K_a, K_b, AND pH (equil2;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson emphasizes the relations between K_{eq}, K_a, or K_b. The problems involve the calculation of acid-base equilibrium concentrations, pH and equilibrium constants.
none;20 minutes;students of general chemistry

EQUILIBRIUM PROBLEMS I: RELATION OF K_{eq} AND CHEM. EQUIL. (equil;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson consists of practice problems on chemical equilibrium.
none;16 minutes;students of introductory chemistry

SOLUTIONS -- CONCENTRATION (conc;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson deals with the use of units of concentration (dimensional analysis) in quantitative chemical work where most chemical reactions take place in solutions. Problems of increasing difficulty are presented particularly the kinds of problem common in chemistry laboratories.
none;46 minutes;college/university students

Chemistry, Organic

Amino acids

AMINO ACIDS: STRUCT. AND BIOCHEM. CHARACTER. (mamino;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson has instructional, reference and drill sections which cover the structures, nomenclature, chemistry (e.g., pK, pI, solubility) and biochemistry (e.g., catabolic fate) of the 20 amino acids commonly found in proteins.
none;15 minutes;first year medical students

NATURAL AMINO ACIDS (amino;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is a drill on the names and structures of natural amino acids.
none;42 minutes;college/university students

Carbohydrates

CARBOHYDRATES III: CARBOHYDRATE IDENTIFICATION AND STRUCTURE (mcarbo;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides drill and practice in the identification of common carbohydrates and carbohydrate derivatives.
none;25 minutes;first year medical students

CARBOHYDRATES IV: IDENTIFICATION OF CARBOHYDRATES (mcarbqz;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois

This lesson is a competitive exercise in which students are asked to identify structures of carbohydrates and their derivatives, picked randomly. Speed and accuracy are emphasized and students compete for the lowest score (i.e., the lowest time with the fewest mistakes).

none;10 minutes;first year medical students

CARBOHYDRATES, PART IIA: STRUCTURE OF MONOSACCHARIDES (CONT) (sugar2a;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois

The lesson is a review of the structure representation of single unit carbohydrates. It is the third in a series of lessons on carbohydrates and is a continuation of "Carbohydrates, Part II".

none;30 minutes;college and university students of organic chemistry

CARBOHYDRATES, PART III: REACTIONS OF MONOSACCHARIDES (sugar3;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois

The lesson is the fourth in the series on carbohydrates. This part treats the reactions of monosaccharides.

none;1 hour;college and university students of organic chemistry

CARBOHYDRATES, PART II: STRUCTURES OF MONOSACCHARIDES (sugar2;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois

The lesson discusses some of the various means of structure representation of single unit carbohydrates. This is the second in a series of lessons on carbohydrates.

none;1 hour;college or university students of organic chemistry

CARBOHYDRATES, PART I: INTRODUCTION TO MONOSACCHARIDES (sugar1;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois

The lesson presents the definition and classification of single unit carbohydrates called monosaccharides. It is the first in a series of lessons on carbohydrates.

none;1 to 1.5 hours;college and university students of organic chemistry

MUTAROTATION OF GLUCOSE (glucose;1975;1977)
Smith, Stanley
Department of Chemistry, University of Illinois

The lesson deals with the purification of glucose and some of its chemical properties. The laboratory separation of the enantiomers of glucose is simulated and the student measures optical activity and mutarotation. Conclusions can be drawn from the measurements about the composition of a solution of glucose in water.

none;33 minutes;college/university students

Functional group chemistry

ALCOHOLS (roht;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson teaches the common and IUPAC names of alcohols. It discusses the preparation by reduction of C=O, hydration, hydroboration, hydrolysis of HX, and Grignard additions. The reactions included are: oxidation, conversion to RX, dehydration, salt and ether formation.
none;89 minutes;college/university students

ALKENE CHEMISTRY (alkenet;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson on alkene chemistry discusses the structure, nomenclature, hydrogenation, bromination and hydroboration of alkenes, and includes animations of and simulated experiments on alkene reactions.
touch panel;44 minutes;college/university students

ALKYNE CHEMISTRY (alkynes;1977;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.
The lesson provides an introduction to the carbon-carbon triple bond acetylenes, known also as alkynes. Information on the structure, nomenclature, preparation and reactions is given.
none;none;college and university students of organic chemistry

DRAWING KEKULE' STRUCTURES OF ARENES (kekule;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson deals with drawing Kekule' structures of arenes. The student indicates, by touching the screen, the positions of the double bonds in five different areas.
touch panel;60 minutes;college/university students

ELECTROPHILIC AROMATIC SUBSTITUTION (arene;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson deals with the introduction of substituents on a benzene ring. The mechanism of electrophilic substitution and its directive effects are presented.
none;58 minutes;college/university students

ESTERS OF CARBOXYLIC ACID (esters;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson is on the preparation and reactions of esters. Experiments are simulated to determine the mechanism of esterification, labeled oxygen exchange and hydrolysis.
none;28 minutes;college/university students

FREE RADICAL HALOGENATION REACTIONS (radical;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson illustrates the mechanism of free radical chlorination and bromination of alkanes and shows how to calculate the heats of reactions from bond energies.
none;57 minutes;college/university students

INTRODUCTION TO CARBOXYLIC ACIDS (rcooh;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson deals with carboxylic acids, their structure, nomenclature and acidity.
none;35 minutes;college/university students

ORGANOMETALLIC CHEMISTRY (orgmet;1976;1978)
Wiegers, Karl
Chemistry Dept., Univ. of Illinois, Urbana, Ill.
The lesson discusses the structure, preparation and reactions of several classes of organometallic compounds.
none;none;college or university students of organic chemistry

PREPARATION AND REACTIONS OF ALCOHOLS: PRAC. PROBLEMS (rohprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The student is given practice problems to solve associated with the preparation and reactions of alcohols.
touch panel;29 minutes;college/ university students

PREPARATION AND REACTIONS OF ALKENES (eneprob;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
Practice problems are presented for reactions associated with the preparation and additions to alkenes. The student is given a group of compounds and reagents and must find interconversions between them by touching the corresponding reactant, reagent and product.
touch panel;28 min;college/ university students

PREPARATION AND REACTIONS OF AMINES (amines;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
Preparation and reactions of amines with problems.
none;none;college/university students

PREPARATION AND REACTIONS OF AMINES - PRAC. PROBLEMS (amineprob;1976;1978)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson gives the student practice in using some of the reactions associated with the preparation and reactions of aliphatic amines.
touch panel;20 minutes;college/university students

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PREP. AND REACTIONS OF CARBOXYLIC ACID: PRACTICE PROBLEMS (acidprob;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson offers review problems on the interconversion of acids, esters, amides, acid chlorides and amides.

It does not function without a touch panel.
touch panel;25 minutes;college/university students

PREP. AND REACT.: ACID CHLORIDES, ESTERS, ANHYDRIDES, AMIDES (rcocl;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a review of the reactions involved in the formation of acid chlorides, esters, anhydrides and amides and then numerous practice problems for the student on these derivatives of carboxylic acids.
none;56 minutes;college/university students

REACTIONS OF ALDEHYDES AND KETONES (PART 2) (ketone2;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson continues the discussions of reactions of aldehydes and ketones.The subjects include enolization, H-D exchange, halogenation of ketones, and aldol condensation reactions with appropriate problems.
none;55 mminutes;college/university students

REACTIONS OF ALDEHYDES AND KETONES: PRAC. PROBLEMS (ketprob;1975,1978;1977)
Smith, Stanley
Chemistry Department, University of Illinois
Practice problems are presented for some reactions associated with the preparation and reactions of aldehydes and ketones.
touch panel;23 minutes;college/university students

SOME ADDITION REACTIONS OF ALDEHYDES AND KETONES (ketone;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is in two parts. The first part contains a simulated experiment to determine the mechanism of cyanohydrin formation. It deals with hemiacetals, acetals, etc. The experimental determination of the pH rate profile for oxime formation is illustrated and the formation of phenylhydrazone and DNP formation is included.
none;42 minutes;college/university students

SUBSTITUTION AND ELIMINATION (sn2t;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The student explores the effects of the structure of alkyl halide and the effect of alkoxide concentration on the rates of these reactions and on the ratio of substitution to elimination.
none;43 minutes;college/university students

SUBSTITUTION AND ELIMINATION REACTIONS - PRACTICE PROBLEMS (subprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson allows the student to practice substitution and elimination reactions. The lesson can only be used with a touch panel. The student is asked to indicate, by touching the appropriate spot on the screen, the starting materials, reagents and products for the reactions.
touch panel;33 minutes;college/university students

Laboratory experiments

FRACTIONAL DISTILLATION EXPERIMENT (distill;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is a simulation of the fractional distillation of pentane and hexane. The student controls the pot temperature and collects fractions. He must separate the mixture. After doing the assigned problem, the student can make up his own distillation problem, specifying the boiling points of the components and the number of column plates.
touch panel;15 minutes;college/university students

FRAKIONIERTES DESTILLATIONSEXPERIMENT (gdistill;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is written in German. The program provides a simulation of a fractional distillation of a 50:50 mixture of pentane and hexane in which the student assembles the apparatus and runs the distillation by controlling the temperature of the heating bath. The object of the experiment is to obtain 40 ml. of each compound with 95% purity.
touch panel;15 minutes;college/university students

IDENTIFICATION OF AN UNKNOWN ORGANIC COMPOUND (quals;1975;unpublished)
Smith, Stanley
Chemistry Department, University of Illinois
Practice is given in this lesson in the identification of unknown organic compounds using a limited set of test reagents. Review of the description of any of the tests is permitted as well as the trial of the test on a known compound. Four correct identifications are required to complete the lesson.
none;119 minutes;college/university students

KINETICS AND MECHANISM OF SEMICARBAZONE FORMATION (carbazone;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson is an advanced one on the formation of a semicarbazone. Each student is required to set up conditions, run, and calculate rate constants for various substituted benzaldehydes in both acid and alkaline medium, and make appropriate rate profile plots and data explanations.

none;80 minutes;advanced students of college/university organic chemistry

LIQUID-LIQUID EXTRACTIONS (extract;1977;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.

The lesson outlines the procedures for simple and multiple extractions. The use of acids and bases in extractions is also discussed.

none;none;college and university students of organic chemistry

MELTING POINTS AND MIXED MELTING POINTS (meltpt;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson discusses melting point determinations as a laboratory technique in organic chemistry. The effect of purity on melting points, phase diagrams and the use of mixed melting points for identification of compounds is shown.

none;17 minutes;college/university students

PURIFICATION BY CRYSTALLIZATION (cry2;1972;1977)
Smith, Stanley
Chemistry Department, University of Illinois

In this lesson, a simulated laboratory experiment, the student is asked to purify a sample of napthalene by recrystallization from methanol. The sample contains both soluble and insoluble impurities. The steps in the purification are outlined and solubility data for napthalene in methyl alcohol is given to aid the student.

none;27 minutes;college/university students

PURIFICATION OF ORG. COMPOUNDS BY CRYSTALLIZATION (crystal;1976,1978;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This lesson reviews some aspects of purification of organic compounds by recrystallization.

none;22 minutes;college/university students

SIMPLE, FRACTIONAL AND STEAM DISTILLATIONS (idistill;1976;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.

The lesson provides a brief introduction to the three types of purification processes: simple, fractional and steam distillation.

none;30 minutes;college and university students of organic chemistry

Multistep synthesis

AROMATIC SYNTHESIS GAME (areneg;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This is an interterminal game for two persons. One player makes up a compound for another player to synthesize. If the player fails to make the compound, the namer of the compound has to synthesize it himself. The first person to prepare five compounds wins the game.

none;open-ended;college/university students of organic chemistry

THE GREAT SYNTHESIS RACE (syng;1973;1977)
Smith S - Chabay R
Chemistry Department, University of Illinois

This is a multistep synthesis game in which two players race to perform a multistep aliphatic synthesis from randomly chosen materials. There are a mono ("syng") and a two-terminal ("syng2") version of the game. The synthesis involves the use of Grignard reactions and simple alcohol-carbonyl group interconversions.

none;66 minutes;college/university students

MULTISTEP ALIPHATIC SYNTHESIS (isyn;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson deals with the interconversion of simple organic compounds. Some approaches to multistep synthesis are outlined using Grignard reactions.Students must prepare several compounds by indicating reagents for each step with the computer drawing the structure of the product.

none;53 minutes;college/university students

MULTISTEP AROMATIC SYNTHESIS (opta;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This lesson gives the student the opportunity to designate the steps in an electrophilic aromatic substitution reaction experiment. The student indicates the sequence of reactions to prepare benzene derivatives by supplying the reagent and the computer draws the structure of the product.

none;39 minutes;college/university students

Nomenclature and structure

CONFORMATIONAL REPRESENTATION OF ORGANIC COMPOUNDS (conform;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The program introduces three dimensional representation of the structure of carbon compounds: conformations of ethane, propane, and butane, energy barriers to rotations about single bonds, and Newman projection formulas.

none;24 minutes;college/university students

DRAWING STRUCTURAL FORMULAS (nomt;1976;1977)

Smith, Stanley

Chemistry Department, University of Illinois

The lesson gives students practice in constructing the structural formulas of a variety of compounds from their names. It is emphasized that structural formulas are a better guide to the chemical and physical properties of compounds than are the names of the compounds.

touch panel;none;college/university students

EMPIRICAL FORMULAS AND PERCENT COMPOSITION (organal;1977;1977)

Smith, Stanley

Chemistry Department, University of Illinois

The lesson deals with the determination of the percent composition of carbon and hydrogen in organic compounds and the determination of the empirical formulas of the compound from typical percent composition data.

none;none;college/university students

INTRODUCTION TO NAMES OF ORGANIC COMPOUNDS (nomc;1972;1977)

Smith, Stanley

Chemistry Department, University of Illinois

The lesson provides an introduction to the nomenclature system of organic chemists by discussing the names of some common organic compounds, specifically the alkanes and alkyl halides.

none;44 minutes;college/university students

INTRODUCTION TO OPTICAL ACTIVITY (chiral;1974;unpublished)

Smith, Stanley

Chemistry Department, University of Illinois

As an introduction to the subject of optical activity of organic molecules, 3-D representations of some organic molecules and their mirror images are graphically presented. The recognition of chiral molecules, the measurement of the rotation of 2-butanol and the subject of optical purity is also discussed and illustrated.

none;59 minutes;college/university students

NAMES AND STRUCTURES OF COMMON FUNCTIONAL GROUPS (fgroup;1974;1977)

Smith, Stanley

Chemistry Department, University of Illinois

The lesson provides the structures of some common functional groups and practice in recognizing them in typical organic compounds.

none;42 minutes;college/university students

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STRUCTURE AND CONFORMATION OF CYCLOALKANES (cyclo;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This lesson deals with nomenclature and conformations of some common cycloalkanes. It includes three dimensional representation of molecules, conformation of ethane, propane and butane, energy barriers to rotations about single bonds and Newman projection formulas.

none;24 minutes;college/university students

Qualitative organic analysis

FRAKIONIERTES DESTILLATIONSEXPERIMENT (gdistill;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This lesson is written in German. The program provides a simulation of a fractional distillation of a 50:50 mixture of pentane and hexane in which the student assembles the apparatus and runs the distillation by controlling the temperature of the heating bath. The object of the experiment is to obtain 40 ml. of each compound with 95% purity.

touch panel;15 minutes;college/university students

QUALITATIVE ORGANIC ANALYSIS (qual;1972;1978)
Smith, Stanley
Chemistry Department, Univ. of Ill., Urbana, Ill.

In this lesson the student is asked to identify nine unknown compounds by asking questions about the results of laboratory experiments on the compound. Questions can be asked about physical and spectroscopic properties and about chemical reactions. The demonstration program, quald, involves the identification of only one compound.

microfiche (not needed by "quald");119 minutes;college/university students

QUALITATIVE ORGANIC ANALYSIS-REVIEW OF REACTIONS & TESTS (introq;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lessons review some of the classification reactions and tests for organic functional groups. Practice problems for interpretation of the test results are included.

none;52 minutes;college/ university students

Spectrum analysis

BRIEF INTRODUCTION TO IR SPECTROSCOPY (ir2;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson presents a brief introduction to infrared spectroscopy and several practice problems in the recognition of the infrared spectrum of some common functional groups: alcohols, amines, aldehydes, ketones, and esters.

microfiche;51 minutes;college/university students

Chemistry, Organic--Experiments

SOME ADDITION REACTIONS OF ALDEHYDES AND KETONES (ketone;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is in two parts. The first part contains a simulated experiment to determine the mechanism of cyanohydrin formation. It deals with hemiacetals, acetals, etc. The experimental determination of the pH rate profile for oxime formation is illustrated and the formation of phenylhydrazone and DNP formation is included.
none;42 minutes;college/university students

Chemistry, Organic--Problems, exercises, etc.

IDENTIFICATION OF AN UNKNOWN ORGANIC COMPOUND (quals;1975;unpublished)
Smith, Stanley
Chemistry Department, University of Illinois
Practice is given in this lesson in the identification of unknown organic compounds using a limited set of test reagents. Review of the description of any of the tests is permitted as well as the trial of the test on a known compound. Four correct identifications are required to complete the lesson.
none;119 minutes;college/university students

PREPARATION AND REACTIONS OF ALCOHOLS: PRAC. PROBLEMS (rohprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The student is given practice problems to solve associated with the preparation and reactions of alcohols.
touch panel;29 minutes;college/ university students

PREPARATION AND REACTIONS OF ALKENES (eneprob;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
Practice problems are presented for reactions associated with the preparation and additions to alkenes. The student is given a group of compounds and reagents and must find interconversions between them by touching the corresponding reactant, reagent and product.
touch panel;28 min;college/ university students

PREP. AND REACT.: ACID CHLORIDES, ESTERS, ANHYDRIDES, AMIDES (rcocl;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a review of the reactions involved in the formation of acid chlorides, esters, anhydrides and amides and then numerous practice problems for the student on these derivatives of carboxylic acids.
none;56 minutes;college/university students

REACTIONS OF ALDEHYDES AND KETONES: PRAC. PROBLEMS (ketprob;1975,1978;1977)

Smith, Stanley
Chemistry Department, University of Illinois

Practice problems are presented for some reactions associated with the preparation and reactions of aldehydes and ketones.

touch panel;23 minutes;college/university students

SUBSTITUTION AND ELIMINATION REACTIONS - PRACTICE PROBLEMS (subprob;1975;1977)

Smith, Stanley
Chemistry Department, University of Illinois

The lesson allows the student to practice substitution and elimination reactions. The lesson can only be used with a touch panel. The student is asked to indicate, by touching the appropriate spot on the screen, the starting materials, reagents and products for the reactions.

touch panel;33 minutes;college/university students

Chemistry, Organic--Qualitative

IDENTIFICATION OF AN UNKNOWN ORGANIC COMPOUND (quals;1975;unpublished)

Smith, Stanley
Chemistry Department, University of Illinois

Practice is given in this lesson in the identification of unknown organic compounds using a limited set of test reagents. Review of the description of any of the tests is permitted as well as the trial of the test on a known compound. Four correct identifications are required to complete the lesson.

none;119 minutes;college/university students

Chemistry, Physical and theoretical--Problems, exercises, etc.

CHANGE-OF-PHASE PROBLEMS (che10;1977;unpublished)

Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on vapor and saturation problems designed for sophomore stoichiometry students in chemical engineering. There are seven problems with randomized variables.

none;64 minutes;sophomore chemical engineering students

ENTHALPY EFFECTS (che4;1977;unpublished)

Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on enthalpy and heats of reactions designed for sophomore stoichiometry students in chemical engineering. There are six different problems with randomized variables. Help is available at almost any point in the lesson.

none;none;sophomore chemical engineering students

FIRST LAW OF THERMODYNAMICS, CLOSED SYSTEMS - PART I (che9;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on the first law of thermodynamics over closed systems, designed for sophomore stoichiometry students in chemical engineering. There are six problems with randomized variables.

none;31 minutes;sophomore chemical engineering students

FIRST LAW OF THERMODYNAMICS, CLOSED SYSTEMS - PART II (che12;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on the first law of thermodynamics designed for sophomore stoichiometry students in chemical engineering. This particular set of six problems involves closed systems which are somewhat more advanced than those in part one. Randomized variables are given.

none;95 minutes;sophomore students of chemical engineering

IDEAL GASES AND REAL FLUIDS - PART I (che11;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is the first of two lessons dealing with the ideal and real gas laws for both pure components and mixtures. The emphasis in this first part is on the van der Waals equation and the Virial equation.

none;97 minutes;sophomore chemical engineering students

IDEAL GASES AND REAL FLUIDS - PART II (che17;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, University of Illinois

This is the second of two lessons dealing with ideal and real gas laws for pure components and mixtures. The emphasis is on the theory of corresponding states as applied to both pure gases and gas mixtures and demonstrates the application of various real gas laws to gas mixtures.

none;55 minutes;sophomore level chemical engineering students

INTRODUCTION TO EQUILIBRIUM STAGES (che14;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, University of Illinois

This lesson is designed to be used either with a chemical engineering stoichiometry class or a unit operations class as an introduction to the concept of equilibrium stage. It includes problems demonstrating the equilibrium stage concept for both vapor-liquid equilibria and liquid-liquid equilibria.

touch panel;55 minutes;college level chemical engineering students

AN INTRODUCTION TO UNITS, SYMBOLS AND REACTION (che15;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on units and reaction in stoichiometry, designed primarily for sophomore chemical engineering students. There are eleven parts, five of which contain problems for practice.

touch panel;74 minutes;sophomore students of chemical engineering

MATERIAL BALANCES WITH CHEMICAL REACTION (ADVANCED) (che6;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems with randomized variables and it is necessary to fill out a mole table for all species listed.

none;52 minutes;sophomore students of chemical engineering

MATERIAL BALANCES WITH CHEMICAL REACTION (BASIC) (che2;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems, each presented with graphic representations. Mole tables must be completed for each one, and help is provided if needed.

none;73 minutes;sophomore chemical engineering students

MATERIAL BALANCES WITHOUT CHEMICAL REACTION (BASIC) (che1;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems, each presented with graphic representations. When needed, detailed help is provided.

none;37 minutes;sophomore chemical engineering students

MATERIAL BALANCES W/O CHEMICAL REACTION (ADVANCED) (che7;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on steady state material balances designed for sophomore stoichiometry students in chemical engineering. There are five different problems and for each equation, the student must supply the entire right hand side of the equation to equal the left hand side which will always be zero.

none;34 minutes;sophomore students of chemical engineering

THERMODYNAMIC DIAGRAMS (BASIC) (che8;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on reading thermodynamics diagrams designed for sophomore students in chemical engineering. There are six different problems.
touch panel;35 minutes;sophomore students of chemical engineering

TOTAL ENERGY BALANCE, STEADY STATE - PART I (che16;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is part one of a lesson on steady state energy balance designed for sophomore stoichiometry students in chemical engineering. There are 5 different problems with randomized variables. Help is available at almost any point in the lesson.
none;48 minutes;sophomore chemical engineering students

TOTAL ENERGY BALANCE, STEADY STATE - PART II (che5;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is part two of a lesson on steady state energy balance designed for sophomore stoichiometry students in chemical engineering. There are 5 different problems with randomized variables. Help is available at almost every point.
none;81 minutes;sophomore chemical engineering students

UNSTEADY STATE ENERGY BALANCES (che22;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, University of Illinois
This is a lesson on transient energy balances designed for chemical engineering stoichiometry students at the level of a first chemical engineering course. The lesson allows the student to practice a variety of transient energy balance calculations.
touch panel;40 minutes;first level chemical engineering students

UNSTEADY STATE MATERIAL BALANCES (che18;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, University of Illinois
This lesson on transient material balances is designed for students of stoichiometry at the level of a first chemical engineering course. It provides practice for the student with a variety of unsteady state material balance problems.
touch panel;45 minutes;first level chemical engineering students

ΔH LAW OF HESS (enthalpy;1976;1977)
Ghesquiere, James R
Comp.-based Educ. Res. Lab., CERL, Univ. of Ill.
This lesson discusses endothermic and exothermic chemical reactions, and teaches the student how to add equations to determine the enthalpy of a reaction.
none;37 minutes;college/university students

Chemistry--Notation

CHEMICAL EQUATIONS (equation;1973;1977)
Grandey, Robert C
Computer-based Educ. Res. Lab., Univ. of Ill.

The lesson teaches the student to balance chemical equations. The copying of the formulas is made easy by the use of a COPY and an EDIT key. The lesson is principally a practice drill in equation technique.

none;none;college/university students of elementary chemistry

Chemistry--Problems, exercises, etc.

CHEMICAL EQUATIONS (equation;1973;1977)
Grandey, Robert C
Computer-based Educ. Res. Lab., Univ. of Ill.

The lesson teaches the student to balance chemical equations. The copying of the formulas is made easy by the use of a COPY and an EDIT key. The lesson is principally a practice drill in equation technique.

none;none;college/university students of elementary chemistry

Chemistry--Study and teaching

TEACHING CHEMISTRY WITH PLATO (chemcourse;1978;unpublished)
Smith, Stanley; Chabay, Ruth
Chemistry Dept., Univ. of Illinois, Urbana, IL

The program is an overview of how to teach chemistry using the chemistry lessons available on PLATO.

none;none;instructors interested in teaching chemistry using PLATO

Chemotherapy

ANTIMALARIAL CHEMOTHERAPY (plasmodia;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center

This lesson presents the chemotherapeutic treatment for malarial infection. It includes the drug spectra, modes of action, indications and contraindications. Questions are incorporated for interaction and self-evaluation.

optional touch panel;none;first year medical students

ANTIMICROBIAL CHEMOTHERAPY (shp66;1975;unpublished)
Gage, William V
Sheppard Air Force Base, Texas

This lesson discusses the general concepts of antimicrobial chemotherapy and the currently available compounds that can be effective in the treatment of infectious diseases.

none;45-60 minutes;physicians' assistants

CHEMOTHERAPEUTICS CASE SERIES: ANTIBIOTICS (kumc16;1975;unpublished)
Kansas University Medical Center; Hody, George; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson presents several disease cases and asks the student to select appropriate treatment from the choices offered.

none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT I (kumc31;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson presents the student with a sick patient, symptoms, medical history and laboratory reports, and asks that the student make a diagnosis.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT II (kumc40;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents several patients to the student, describes the illnesses, and provides discussion of the therapies and medications that have been prescribed by "Dr. PLATO".
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT III (kumc24;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry
University of Kansas / University of Illinois
This lesson presents patients and symptoms, and asks the student to practice making diagnoses and prescribing treatment.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT IV (kumc25;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
In this lesson, several disease cases dealing with antibiotic treatment are discussed.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT V (kumc26;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents several disease cases and discusses the positive and negative aspects of the antibiotics chosen for treatment.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: MALIGNANT NEOPLASMS (kumc34;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson discusses chemotherapeutic treatment of cancer. The relationship of tumor cell toxicity to host cell toxicity known as chemotherapeutic index is explained.
none;20 minutes;first year medical students

CHEMOTHERAPY OF AMEBIASIS (amoeba;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center

This lesson presents the chemotherapeutic treatment for Entamoeba histolytica infection. It includes modes of action, toxicities and contraindications. Questions are incorporated for interaction.

optional touch panel;20 minutes;first year medical students

CHEMOTHERAPY OF MISCELLANEOUS PROTOZOAN INFECTIONS (mispro;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center

This lesson presents the chemotherapeutic treatment of miscellaneous protozoan infections. It includes the drug spectra, modes of action, indications and contraindications. Questions are included for interaction and self-evaluation.

optional touch panel;45 minutes;first year medical students

EXTRAINTESTINAL ANTIHELMINTHICS (exhel;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center

This lesson presents the chemotherapeutic treatment for extraintestinal helminths. It includes the drug spectra, modes of action, indications and contrindications. Questions are incorporated for interaction and for self-evaluation.

optional touch panel;30 minutes;first year medical students

INTESTINAL ANTHELMINTHICS (helminth;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center

This lesson presents the chemotherapeutic treatment for intestinal helminths. It includes drug spectra, modes of action, indications and contraindications. Questions are incorporated for interaction and self-assessment of subject mastery.

optional touch panel;30 minutes;first year medical students

Chess

CHECKMATE (mate;1974;unpublished)
Vondruska, Richard
University of Illinois, Urbana IL

This lesson attempts to familiarize the student with the use of algebraic chess notation, which is being used as an alternative to English descriptive notation, and to teach the student elementary checkmates.

none;open-ended;general

WELCOME TO CHESS (ychess1;1972;1978)
Thomasson, James; Weast, Gordon
University of Illinois, Urbana, Illinois

The time honored game of chess has been implemented on the PLATO system. Many options are given: playing against the computer, the computer playing various strengths; playing against another person at the same or at a different terminal; playing by 'mail'(leave between moves); playing blind or crazy chess; looking at selected famous games.

none;variable;anyone interested in the game of chess

Chest

GROSS ANATOMY OF THE THORACIC CAGE (shp90;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas

This lesson presents the anatomy of the thoracic cage.

none;90 minutes;physicians' assistants

HUMAN SKELETAL SYSTEM: PART I - THE THORAX (skelsys2;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thorax. Surfaces, borders and markings of the sternum, costal cartilages, and typical and atypical ribs are illustrated and described. Boundaries of the thoracic inlet and outlet are defined. Directions for palpating subcutaneous parts of these bones are included. There is a post-test.

none;20 minutes;first year medical students

Chest--Radiography

X-RAY OF THE CHEST, PART I (shp54;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas

This lesson will teach the student to identify the proper xray view of the chest to meet the needs of a given situation.

slide set of xrays;20-30 minutes;radiologists

X-RAY OF THE CHEST, PART IV (shp98;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas

This lesson teaches the student to look at and read specific chest xrays.

This lesson requires slides of specific xrays.;60 minutes;radiologists

X-RAY OF THE CHEST, PARTS II AND III (shp60;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas

This lesson teaches the student to become familiar with the xray appearance of the bones of the thoracic cage, the mediastinum and the lungs.

none;45-60 minutes;radiologists

Child abuse
see Cruelty to children

Children--Care and hygiene
IMMUNIZATION AGAINST INFLUENZA IN HIGH-RISK CHILDREN (flu;1976;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents recommendations for vaccination of children with a high risk from contracting influenza, as specified by the American Academy of Pediatrics in the winter of 1976-77. Questions regarding the seroimmunity and antigenic characteristics of influenza are interspersed.
none;5 minutes;medical students

PAINFUL KNEE IN A CHILD: MANAGEMENT AND PROGNOSIS (knee;1977;unpublished)
Trotter, David; Ray, Robert D; Nelson, Charles D
Abraham Lincoln School of Medicine, Univ. of Illinois
In this simulated case study, an eight-year-old male is presented with a painful knee resulting from a street fight. The student must diagnose and treat the problem from historical and physical information gathered, and from the interpretation of x-rays.
microfiche;none;medical students

SWOLLEN, PALPABLE MASS IN A SEVEN-YEAR-OLD BOY (fibula;1978;unpublished)
Trotter, David; Barmada, Riad; Ray, Robert D; et al.
Abraham Lincoln School of Medicine, Univ. of Illinois
In this case study a seven-year-old male suffers from malaise, fever and intermittent pain in the right proximal leg. The boy has been complaining of pain for about two months, but the parents dismissed it as "growing pains". The student must work up the case with history, physical, lab studies, diagnosis and treatment.
microfiche;15 minutes;medical students

TENDER, PAINFUL EXTREMITIES (femur;1977;unpublished)
Trotter, David; Ray, Robert D; Barmada, Riad
Abraham Lincoln School of Medicine, Univ. of Illinois
This case study presents a four-year-old male with a 72-hour history of irritability, fever and dyspnea. The student must offer tentative diagnosis, gather historical, physical and lab data, diagnose and treat the problem.
microfiche;none;medical students

Chinese
INTRODUCTION TO CHINESE CHARACTERS (chinese;1976,1978;1978)
Cheng, Chin-Chuan
Department of Linguistics, University of Illinois
This lesson provides an introduction to Chinese characters. The lesson is now a revised (1978) version of the original lesson and has had some PLATO V features included in the lesson.
none;15 hours ;college/university students

Chi-square test

THE CHI-SQUARE DISTRIBUTION AND GOODNESS OF FIT (elstat11;1974;1977)
Cohen, Jerry L
Psychology Department, University of Illinois
This lesson defines and discusses chi-square distribution and goodness of fit.
none;60 minutes;psychology students

CHI-SQUARE FOR ASSOCIATION (elstat11a;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois
In this lesson the student examines the statistical method, chi-square for association, as a means of determining if two classifications of a population are independent of one another.
none;60-90 minutes;psychology students

LOG SCALES, METRIC SYSTEM, CHI-SQUARE ANALYSIS (met;1978;unpublished)
Hyatt, Gary; Baillie, Robert
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses question-answer and drill and practice techniques to demonstrate use of the metric system, logarithmic scales and chi-square analysis.
none;variable, depending on parts used;university/college students

Chlorine in the body

MACROMINERALS (macmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson presents information about macrominerals, or those minerals required in the human diet in amounts exceeding 100 mg. per day. The macrominerals are calcium, phosphorus, magnesium, potassium, sodium, sulphur and chlorine.
none;25-30 minutes;nutrition students

Chloroform

CNS PHARMACOLOGY: GENERAL ANESTHESIA (kumc29;1975;unpublished)
Kansas University Medical Center; Nelson, S; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson covers the general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

Chloromycetin

ANTIMICROBIAL CHEMOTHERAPY (shp66;1975;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson discusses the general concepts of antimicrobial chemotherapy and the currently available compounds that can be effective in the treatment of infectious diseases.
none;45-60 minutes;physicians' assistants

Cholinesterase inhibitors

AUTON. PHARMACOL.: CHOLINERGIC MECHANISMS & USES (kumc9;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the effects of stimulation and blockade of muscarinic and nicotinic receptors.
none;25 minutes;first year medical students

Chromatin

CHROMOSOMES AND KARYOTYPING, PART I (chrom;1975;unpublished)
Chirolas, Darlene
School of Basic Medical Sciences, Univ. of Illinois
This lesson describes the characteristics and classification of chromosomes and presents the standard human karyotype symbols and notation. Eight syndromes are explained along with the karyotype notation and clinical signs for each. Barr bodies and the Lyon hypothesis are also discussed.
microfiche;30 minutes;first year medical students

Chromosome mapping

GENE MAPPING IN DIPLOID ORGANISMS (cover;1973;unpublished)
Scotese, Karen Frank
University of Illinois Circle Campus, Chicago, Ill.
This lesson discusses crossover and gene mapping and follows with practice problems.
none;60-90 minutes;biology students and persons interested in genetics

Chromosomes

CHROMOSOMES AND KARYOTYPING, PART I (chrom;1975;unpublished)
Chirolas, Darlene
School of Basic Medical Sciences, Univ. of Illinois
This lesson describes the characteristics and classification of chromosomes and presents the standard human karyotype symbols and notation. Eight syndromes are explained along with the karyotype notation and clinical signs for each. Barr bodies and the Lyon hypothesis are also discussed.
microfiche;30 minutes;first year medical students

CHROMOSOMES AND KARYOTYPING, PART II (karyo;1975;unpublished)
Chirolas, Darlene; Tenczar, Paul J
School of Basic Medical Sciences, Univ. of Illinois
This two part lesson deals with identification of karyotypes and actual karyotyping.
touch panel and microfiche;15 minutes;first year medical students

Chronic diseases

CHRONIC BRONCHITIS (shp108;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas

This lesson presents the one major factor in developing chronic bronchitis. The student will also learn to determine whether or not an individual has chronic bronchitis and what are the proper modes of therapy for the patient.

none;60-90 minutes;physicians' assistants

Cilia and ciliary motion

MEDICAL PARASITOLOGY VI: TISSUE AND LUMEN-DWELLING CILIATES (cilia;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

Incorporated into this lesson in a linear interrogative format is the information on general ciliate characteristics and on thermophology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment of the pathogen, Balantidium coli. A diagnostic quiz over the material is also available for those interested in reviewing.

none;5 minutes;first year medical students

Circle

CIRCLE STUFF (circles;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.

This lesson is an exercise in circle plotting.

none;open-ended;elementary mathematics students and general

Circuits, Electric

see Electric circuits

Circuits, Integrated

see Integrated circuits

Classical mechanics

Dynamics

FORCES AND FREE-BODY DIAGRAMS (cb10;1975;1977)
Bennett, Carol D
Physics Department, Univ. of Illinois, Urbana, Ill.

The lesson introduces typical forces, including tension in a string and friction between surfaces. It treats the concept of a free body and has the student isolate and analyze various kinds of subsystems for the forces.

none;70 minutes;college/university students

PROBLEM-SOLVING LESSON USING NEWTON'S LAWS OF MOTION (freel;1971,1972;1977)
Sherwood, Bruce Arne; Burson, Craig
Physics Department, University of Illinois

This lesson is a problem-solving lesson using Newton's laws of motion. The student is given a careful set of systematic procedures for solving problems of this kind, and then is given several exercises on simple one- and two-body systems. There is a "mastery quiz" at the end of the lesson.

none;80 minutes;college/university students of introductory physics

RING GAME (ring;1974;unpublished)
Bennett, Carol D
Physics Department, University of Illinois

The game consists of attempting to stop the motion of a ring which is moving. Two forces causing the motion are given, and the player must figure out a third force and where it should be applied to arrest the motion of the ring.

none;15 minutes;college/university

General mechanics

INTERTERMINAL PROBLEM SOLVING CONTEST-VECTORS AND KINEMATICS (p106con1;1976;1978)
Smith, James H; Kane, Dennis
Physics Department, University of Illinois

The object of this interterminal problem solving contest is to solve a problem in vectors or kinematics in less time than it takes an opponent to solve it. The players can accept, reject or withdraw challenges while playing. The game is played between players at different terminals.

none;open-ended;students of elementary college physics

PHIZQUIZ: PROB.-SOLVING TEST IN ELEM. MECHANICS (phizquiz1;1973;1977)
Peterson, S Bradley; Smith, James H; Kane, Dennis
Physics Department, University of Illinois

Eight problems are presented to the student drawn from major areas of classical mechanics. The basic situation is described and then the student must "buy" specific information (masses, velocities, etc.). The student is charged for irrelevent information, so that care is required to solve each problem at minimum cost.

none;50 minutes;college/university students of classical mechanics

RELATIVE MOTION: RIVER PROBLEM (river;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

This program contains the age-old relative motion problem of a boat crossing a stream. Two options are given: 1) to move a boat to a dock straight across a river from the starting point; 2) to move a boat to a dock 45° downstream from the starting point. The user can experiment with various values for the speed of the river current.

none;none;anyone

Gravitation

ORBITS (orbits2;1974;unpublished)
Bennett, Carol D; Kane, Dennis
Physics Department, University of Illinois, Urbana

The lesson presents two-dimensional orbit equations and numerical two-dimensional kinematics. Vectors are defined and their proper notation discussed, as well as gravitational acceleration. The procedures are explained and the equations can be plotted.

none;none;physics students

ORBITS PLOTTER (orbits;1974;unpublished)
Bennett, Carol D; Kane, Dennis
Physics Department, University of Illinois, Urbana

The program plots satellite orbits for one or two force centers (earths). The student is guided through a sample case, then given a list of options for changing parameters or setting up a new system.

none;none;physics students

Kinematics

GRAPHICAL KINEMATICS (grafdif;1973,77;1978)
McNeil, E B
Physics Dept., Univ. of Ill. at Chicago Circle

The lesson teaches the connection between the slope of a curve and its derivative, in other words: graphical differentiation. The student makes input by means of a graphics cursor. The immediate feedback provides an advantage over the usual homework problem pencil and paper method of practice and understanding of the subject.

none;2 hours;college and university students

GRAVITATIONAL POTENTIAL ENERGY (gravpot;1978;unpublished)
Beece, Daniel
Dept. of Physics, U of I, Urbana, Ill.

The purpose of this lesson is to provide an introduction to gravitational potential energy. It assumes that the student is familiar with the concepts of force and acceleration, and the Work-Energy equation.

touch panel;none;college/university students

KINEMATICS I (kineml;1970,1972;1977)
Sherwood, Bruce Arne; Peterson, S Bradley; Beece, Daniel
Physics Department, University of Illinois

The lesson presents the basic concepts of position, velocity, acceleration, and time based on the familiar aspects of automobile travel. The lesson includes training in the reading of graphs, and in applying the principles illustrated in the lesson. A mastery quiz is included.

none;40 minutes;college/university students in introductory physics

KINEMATICS II (kinem2;1973,1977;1977)
Sherwood, Bruce Arne; Beece, Daniel
Physics Department, University of Illinois
The lesson presents a simple numerical integration with graphs which leads up to the derivation by the student of the equation $x_f = x_i + v_i t + at^2/2$, the determination of the position of an object given its acceleration. Applications of the concepts and a mastery quiz are included.
none;90 minutes;college/university students in introductory physics

MOTION OF A WHEEL, SLIDING AND ROLLING (cb7;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
This is an exercise on the forces involved in the motion of a wheel which is sliding and rolling. The problem is illustrated with animation.
none;none;students of classical mechanics, elementary physics

ORBITS (orbits2;1974;unpublished)
Bennett, Carol D; Kane, Dennis
Physics Department, University of Illinois, Urbana
The lesson presents two-dimensional orbit equations and numerical two-dimensional kinematics. Vectors are defined and their proper notation discussed, as well as gravitational acceleration. The procedures are explained and the equations can be plotted.
none;none;physics students

PROJECTILE MOUNTAIN GAME AND MORE (physgame;1973;unpublished)
Bennett, Carol D
Physics Department, University of Illinois
There are four games in this program. The Projectile Mountain Game can be played with one or two players. The other games involve target hitting and/or orbit estimation.
none;open-ended;anyone

TWO-DIMENSIONAL KINEMATICS (kinem3;1975;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson introduces and tests the basic concepts of vector displacement, velocity, average velocity, and acceleration. Various applications deal with kicking a football. Circular motion is also treated, including a derivation of the radial acceleration v^2/r. Applications include satellite motion. A mastery quiz ends the lesson.
none;170 minutes;college/university students in introductory physics

Momentum

EXERCISE ON CONSERVATION OF LINEAR MOMENTUM IN COLLISIONS (collide; 1976;unpublished)
Kane, Dennis
Physics Department, Univ. of Illinois, Urbana, IL

The lesson is a drill on the application of the principle of conservation of linear momentum for isolated systems (systems on which no external forces are acting). The system in the drill is a pair of objects cn a frictionless surface (e.g. pucks on an air table). The drill may be repeated as often as desired.

none;open-ended;college/university students of classical mechanics

LOCATION OF CENTER OF MASS OF SYSTEM OF PARTICLES (kane;1976;1977)
Kane, Dennis
Physics Department, University of Illinois

In this drill on center of mass determination the student can move a cursor, by pressing arrow keys, to the center of mass of the system presented in the problem. The computer judges the student's solution. A calculator option is provided for the student to use in solving the problem. A different system is presented on each try of the drill.

none;5 minutes for each problem;college/university

MOMENTUM (conserve;1971,1974;1977)
Sherwood, Bruce Arne; Kane, Dennis; Schultz, Charles
Physics Department, University of Illinois

This lesson is on the role of momentum in collisions with emphasis on conservation of momentum for isolated systems. It is expected that the student is familiar with two-dimensional kinematics including velocity and its vector description.

none;45 minutes;college/university students in introductory physics

Classical mechanics

Rotational dynamics

GYROSCOPE EXPERIMENT - SIMULATION (gyrolab;1973;unpublished)
Bennett, Carol D
Physics Department, University of Illinois

The object of the lesson is to measure the precession of a gyroscope when a torque is applied to one end. The result is compared with theory. This lesson is intended as an introduction to the actual experiment.

none;none;students of classical mechanics, elementary physics

KINETIC ENERGY OF ROTATION AND MOMENT OF INERTIA (rel4;1976;1978)
Kane, Dennis
Physics Department, University of Illinois

The lesson gives the student drill in calculating I and KE for various rotating systems. The introduction contains a review of the principles involved in the calculations.

none;20 minutes;college/university students

PROBLEM-SOLVING LESSON IN CLASSICAL ROT. DYNAMICS (free2;1972,1973;1977)
Sherwood, Bruce Arne; Burson, Craig
Physics Department, University of Illinois
The complication of rotational motion is added to the problems involving dynamics systems in this problem-solving exercise. The student is given the option of examining all the problems to be solved before solving any of them. The lesson includes a mastery quiz.
none;70 minutes;college/university students of introductory physics

RADIAN MEASURE (inertia;1974;unpublished)
Bennett, Carol D; Smith, James H
Physics Department, University of Illinois, Urbana
This elementary classical mechanics lesson discusses radians and degrees, with the intent that the user master the concepts of radian angle measure and $\sin(\theta) \to \theta$ as $\theta \to 0$.
none;none;physics students

ROTATIONAL DYNAMICS (rotdyn;1977;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson gives an overview of the major concepts needed to analyze the motion of objects that rotate. The lesson uses a small amount of calculus.
none;80 minutes;college/university students in introductory physics

TORQUE AND ANGULAR MOMENTUM (torque;1974;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson presents the concepts of torque and angular momentum and includes drills on direction and magnitude of torques applied by a wrench (treatment is mainly two-dimensional). Angular momentum is calculated fro a spinning and translating dumbbell. There is also an example of angular momentum conservation.
none;60 minutes;college/university students in introductory physics

TORQUE GAME (torgame;1976;1978)
Bennett, Carol D
Physics Department, University of Illinois
The program consists of three "Olympic" torque games involving balancing masses on a pivoted rod. The exercises in each game are timed with time penalties for errors. The use of a touch panel is optional for playing the games.
touch panel (optional);none;students of classical mechanics

Simple harmonic motion

OSCILLATIONS (oscill;1974;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
Basic concepts of amplitude, period and frequency are introduced in this lesson in connection with a calculable anharmonic oscillator (two inclines facing each other). A spring-mass system is treated by analogy with circular motion, and by optional calculus treatment. Also included are experimental simulations and other applications.
none;110 minutes;college/university students of introductory physics

Vectors

A DRILL ON VECTOR BASICS (vectors;1976;1977)
Kane, Dennis
Physics Department, University of Illinois
The drill consists of five exercises involving components, and addition and subtraction of vectors.
none;45 minutes;college/university students in introductory physics

RELATIVE MOTION (relmo;1975;1978)
Bennett, Carol D
Physics Department, University of Illinois
The lesson derives the basic formula for Galilean transformation of velocity between moving coordinates. The student is led interactively through an experimental measurement of the speed of one of two moving objects relative to the other, and then through the theoretical calculation of this speed.
none;15 minutes;students of classical mechanics in elementary physics

THE VECTOR OLYMPICS (vgame;1976;1977)
Sherwood, Bruce Arne
Department of Physics, University of Illinois
This program contains three vector-associated games: estimating lengths of vectors in centimeters, algebraic form of components of a vector in randomly-chosen coordinate frames, and centimeter lengths of components in such frames.
touch panel;open-ended;none

VECTORS (show;1973,1974;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The purpose of this lesson is to give students help in gaining a working understanding of vectors. A review of graphing in x-y coordinates and of sines and cosines is included. A knowledge of vectors and vector notation is extremely important in the study of physics because it provides a compact way to express spatial relationships.
none;50 minutes;college/university students of introductory physics

WORKOUT (workout;1976;unpublished)
Sutton, David C; Sherwood, Bruce Arne
Physics Department, University of Illinois, Urbana
This elementary level classical mechanics lesson presents four different games involving work: Polevault, Steeplechase, Hammerthrow and Sabercross.
touch panel;open-ended;physics students

Work and kinetic energy

STORED ENERGY (work;1977;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson treats the general work-energy equation, including thermal and other internal energies (essentially the first law of thermodynamics, but in a mechanics setting) with emphasis on how the choice of subsystem affects the form of work-energy equation.
touch panel;80 minutes;college/ university

WORK AND KINETIC ENERGY (FOR CONSTANT FORCES) (dz;1975;1978)
Kane, Dennis
Physics Department, University of Illinois
The lesson discusses work and kinetic energy for constant forces. The sections on work and on kinetic energy each begin with a review of the basic concepts involved. The lesson ends with a quiz which must be completed to obtain credit for completing the lesson.
none;70 minutes;college/university

WORK DONE BY POSITION-DEPENDENT FORCES (kanel;1975;1977)
Kane, Dennis
Physics Department, University of Illinois
The work done by position-dependent forces is presented in this lesson. The work done by step function forces is explained and illustrated. The student divides a force-distance curve into successively smaller steps to approach an integral. Applications shown include work done by a spring.
none;20 minutes;college/university students in introductory physics

WORKOUT (workout;1976;unpublished)
Sutton, David C; Sherwood, Bruce Arne
Physics Department, University of Illinois, Urbana
This elementary level classical mechanics lesson presents four different games involving work: Polevault, Steeplechase, Hammerthrow and Sabercross.
touch panel;open-ended;physics students

Classical mechanics--Problems, exercises, etc.

PROBLEM SETS FOR CLASSICAL MECHANICS (mechhwl;1974,1977;1978)
Smith, James H; Kane, Dennis; Sherwood, Bruce Arne; et al.
Physics Department, University of Illinois

This is a series of homework problem sets for use with a physics course in classical mechanics. The student is not considered to be finished with each set until he has mastered each problem. Each problem is scored and retrials of the problems may improve the original score. Lesson names for the series are "mechhwl-mechhwl8".

none;100 minutes per set, 23 hours total;college/university students

Clavicle

HUMAN SKELETAL SYSTEM: PART V - SHOULDER GIRDLE (skelsys5;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the shoulder girdle. Surfaces, borders and markings of the clavical and scapula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

Climatology

CLIMATOLOGICAL DATA FOR URBANA (cuweather;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this lesson, climatological data for Urbana can be graphed. A list of variables is provided.

This lesson is part of the Population Dynamics package.

none;open-ended;persons studying population or weather forecasting

WEATHER HISTORY ANALYSIS (cuwtemp;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this lesson, weather history can be charted and analyzed. Lists of available variables are provided. This lesson is part of the Population Dynamics package.

none;open-ended;persons studying population or weather forecasting

Clinical chemistry

see Chemistry, Clinical

Clinical enzymology

ENZYME: CLINICAL DIAGNOSIS BY LABORATORY METHODS (enzyme;1976;unpublished)
Hain, Timothy C; Ressler, Newton
Abraham Lincoln Medical School, Univ. of Illinois

This lesson uses a game format to teach the use of enzyme assays in the diagnostic process. Scoring is based on time needed to complete a case, number and aptness of assays ordered and number of correct answers. The game can be played at four levels, ranging from student to physician. A detailed help section is provided.

optional touch panel;30 minutes;medical students

Clinical neurology

BIG CITY NEUROLOGIST AND MRS. CRIBBLECROBBLES (curtiss19;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois

This lesson presents a case study review of the findings of a classical brain tumor syndrome.

none;10-20 minutes;students of occupational therapy, medical students

MR. Q'S DILEMMA, OR DIFFERENT STROKES FOR DIFFERENT FOLKS (strokes;1977;unpublished)
Curtis, Brian A; Adams, Lawrence J
Peoria School of Medicine, University of Illinois

This lesson in clinical neurology touches on cerebrovascular accidents and the expected course, upper and lower motor neuron lesions, and spinal cord lesions.

touch panel;45-60 minutes;occup. therapy and med. students

MYSTERIOUS SPINAL CD. CASE III:NEUROGENIC BLAD. (curtiss14;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois

This lesson provides a review of the bladder emptying reflex, and differentiation between the flaccid and spastic neurogenic bladder.

none;5-10 minutes;students of occupational therapy, medical students

MYSTERIOUS SPINAL CD. CASE II: THE BROWN SEQUARD SYNDROME (curtiss13;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois

This lesson is a simulated case study of the expected findings in the Brown-Sequard Syndrome correlated with the functional neuroanatomical findings. If certain key questions are missed, remedial information is provided.

optional touch panel;5-15 minutes;occup. therapy and med. students

MYSTERIOUS SPINAL CD. CASE IV: ANTER. SPINAL ART. OCCLUSION (curtiss15;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides review of the expected clinical findings of the anterior spinal artery occlusion syndrome, correlated with expected neuroanatomical defects.
none;5-10 minutes;students of occupational therapy, medical students

MYSTERIOUS SPINAL CD. CASE I: THE TUMOR AND MRS. X (curtiss12;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the functional neuroanatomy of selected spinal cord tracts, deep tendon reflexes, and reflex arcs, with remedial instruction made available when key questions are missed. Also covered is the level localization of a spinal cord lesion.
optional touch panel;10-15 minutes;occup. therapy and med. students

NEUROSTAKES: COMPETITIVE QUIZ IN NEUROLOGY AND NEUROANATOMY (curtiss22;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson contains a quiz over neurological and neuroanatomical materials covered in the PLATO neurology lessons. There are two sections, each with five questions in each of five categories. Thirty seconds are allowed for answering a question and points are subtracted for wrong answers.
none;10-15 minutes;students of occupational therapy, medical students

SPINAL NERVE LESION (curtiss10;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a simulated case of a spinal nerve lesion with remedial information available when certain key questions are missed.
none;10-20 minutes;students of occupational therapy, medical students

STROKE SYNDROME CASE STUDY I (curtiss18;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson presents a case study reviewing the classic findings of a relatively common stroke syndrome.
optional touch panel;10-20 minutes;occup. therapy and med. students

STROKE SYNDROME CASE STUDY II (curtiss21;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson presents a case study review of a very common stroke syndrome of the elderly.
none;5-10 minutes;students of occupational therapy, medical students

THE UNANSWERABLE WORD-LANGUAGE DYSFUNCTION (curtiss20;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson presents common patterns of language dysfunction secondary to organic brain damage, and a brief discussion of dysarthria.
optional touch panel;10-20 minutes;occup. therapy and med. students

Coccyx

HUMAN SKELETAL SYSTEM: PT.II - PELVIC GIRDLE (skelsys;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This lesson on osteology introduces the student to the bones of the pelvic girdle. Surfaces, borders and markings of the hipbone, sacrum and coccyx are illustrated and identified. The bony landmarks of the pelvic inlet and outlet are identified, as well as characteristics which aid in determining the sex of the pelvis. A post-test is included.
none;20 minutes;first year medical students

Colorimetry

HEMOGLOBIN DETERMIN. USING THE KLETT-SUMMERSON COLORIMETER (mcmikewk;1978;unpublished)
McMichael, Joseph L
School of Medicine, Univ. of Maryland, Baltimore
This lesson deals with hemoglobin determination using the Klett. It has three parts: 1) description of the Klett, b) procedure of usage, and c) post-test. A labeled diagram of the Klett is presented with a description of the function of its parts. The procedure explains how the Klett is used, and the post-test requires calculation by the student.
none;none;students of medical technology, medical students

Combinations

PERMUTATIONS AND COMBINATIONS (elstat8;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson deals with permutations, the products of consecutive positive integers and combinations.
none;open-ended;college/university students

Combinatorial analysis

PERMUTATIONS AND COMBINATIONS (elstat8;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson deals with permutations, the products of consecutive positive integers and combinations.
none;open-ended;college/university students

Commerce--Mathematical models

WORLD GRAIN TRADE MODEL (fmaps;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using world grain trade variables can be graphed. A list of available regions is provided and the variables and parameters can be changed in each projection.
none;open-ended;for persons studying populations

Communicable diseases

ANTIMICROBIAL CHEMOTHERAPY (shp66;1975;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson discusses the general concepts of antimicrobial chemotherapy and the currently available compounds that can be effective in the treatment of infectious diseases.
none;45-60 minutes;physicians' assistants

MORBIDITY SURVEY (morbsur;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides the student access to a morbidity survey of 19 infectious diseases reported by the Communicable Disease Center. The reported cases for various years may be compared, via PLATO's graphing capabilities, on a cumulative or non-cumulative basis.
touch panel;open-ended;first year medical students

Communication

Interterminal

TALKOMATIC (talkomatic;1976;1977)
Brown, Douglas W; Woolley, David R
Comp.-based Educ. Res. Lab., University of Illinois
A multi-terminal communication program in which there are six channels of communication each holding five persons. It is possible to protect a channel so that only those persons may be added who have the approval of those already using the channel, or to lock out anybody else.
A single channel variation of "talkomatic" is "minitalko".
none;open-ended;general

WELCOME TO ITALK (italk;1975;unpublished)
Gold, Loren; Friedman, H. George
Department of Computer Science, University of Illinois
This lesson provides a means of on-line communication between instructor and student. One or two instructors may use the lesson at one time and it has the capacity for four student users. The instructors see all of the conversations; the student sees only his/her own conversation.
none;open-ended;instructors

Communication

PLATO student bulletin board

ON-LINE STUDENT BULLETIN BOARD (bulletin;1975;1977)
Friedman, H. George
Department of Computer Science, University of Illinois
Instructions are given as well as a program for setting up an on-line student bulletin board for use with student courses.
none;none;students in a PLATO course

Communications research

VERBAL & NONVERBAL MEMORY FOR SEQUENTIAL INFORMATION (vondruska;1977;1978)
Vondruska, Richard; Cohen, Jerry L
Psychology Department, University of Illinois
This psychology lesson concerned with imagery, is an experiment designed to investigate the two modes of thought -- verbal and nonverbal -- and how they are employed in a task which requires memory for sequential information.
pencil and paper;10 minutes;college level psychology students

Communication--Psychological aspects

VERBAL & NONVERBAL MEMORY FOR SEQUENTIAL INFORMATION (vondruska;1977;1978)
Vondruska, Richard; Cohen, Jerry L
Psychology Department, University of Illinois
This psychology lesson concerned with imagery, is an experiment designed to investigate the two modes of thought -- verbal and nonverbal -- and how they are employed in a task which requires memory for sequential information.
pencil and paper;10 minutes;college level psychology students

Competition (Economics)

MICRO ECONOMICS II: IMPERFECT COMPETITION (consume4;1976;1977)
Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois
The lesson presents the subject of less than perfect competition (imperfect competition) among firms conducting business in markets where there are numerous producers selling a differentiated product. The lesson stresses the simularities between monopoly, oligopoly, and monopolistic competition.
none;40 minutes;college/university

PERFECT COMPETITION (microiii;1976;1977)
Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois
The lesson reviews the competition concepts learned in the lesson on "Imperfect Competition" showing how producers in our society are faced as an industry with a market demand curve which is the sum of all demand curves of individual consumers. The lesson then presents the concept of perfect competition in which firms sell standardized products.
none;40 minutes;college/university

Complements (Immunity)

CYTOTOXIC HYPERSENSITIVITY (mdimmum;1975;unpublished)
Kessel, Ross; Wagner, Kenneth; Cohen, Barry; et al.
University of Maryland and University of Illinois
This lesson deals with cytotoxic (Type II) hypersensitivity. It covers the mediators and the mechanisms of cytotoxic hypersensitivity as well as the laboratory investigation, management and pathology of some cytotoxic disease states.
none;30 minutes;first year medical students

Composers

ROMANTIC ERA COMPOSERS (mus421g;1977;1978)
Watanabe, Nan T; Fonder, Mark; Rassier, Daniel A
Music Department, U of I, Urbana, Ill.
This is a thirty-item quiz on the Romantic Era composers. There are three clues available for each question to aid the user in supplying the correct answer.
none;none;general

Composition (Music)

TRANSPOSITION (transpose2;1977;unpublished)
Bartlett, Judith A
School of Music, University of Illinois
This is a program to write music and transpose it. Four staffs may be used at one time and choices of clef, notes and key are provided.
none;open-ended;students of music and composition

Compton effect

THE COMPTON EFFECT (compton;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
The program is an exercise showing the Compton effect using animated graphics. The student is allowed to experiment with different photon wavelengths, particle masses and collision angles in order to visualize the effects of the changes.
none;open-ended;students in course on Modern Physics

Computer graphics
  Graphic methods

GRAPHICAL LESSON STRUCTURE DESIGN (csdesign;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Illinois
The lesson provides a "quick and dirty" means to design the calling structure of a lesson.
none;open-ended;college and university students of computer science

GRAPHICS (graphics;1976;1977)
Schreiner, Axel T
Mathemetics Department, University of Illinois
This is a program for the creation and modification of geometrical objects such as lines, conic sections and graphs of functions. After creating the geometrical object, the user can then apply transformations (rotations, involutions, etc.). The program accepts a mathematical syntax for the equations to be described as well as all BASIC functions.
none;open-ended;college/university students

MULTCHAR (multchar;1976;1979)
Lekas, Anthony; Gutfreund, Steven
Computer Science Department, U of I
This lesson presents a new way for PLATO lesson authors to design large arrays of characters.
none;open-ended;lesson authors

ROSE (rose;1976;1978)
Sleator, Daniel; Sleator, Tycho
University of Illinois
The first three sections of this lesson generate rose patterns. The final four sections are games: Conway's Game of Life; X,Y Equation Solver Game; Morse Battle Game; Brain-o-Battle.
none;open-ended;none

TECHNIQUES OF IN-LINE ANIMATION (animation;1976;1978)
Parrello, Bruce
University of Illinois
This lesson is an introduction to in-line (as opposed to hard-coded) animation.
none;open-ended;computer programmers

Computer input-output equipment

BRIEF INTRODUCTION TO THE PLATO KEYBOARD (keyboard;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The program gives a brief introduction to the PLATO keyset, with explanations of and some interactions with essential keys.
none;10 minutes;anyone

INTRODUCTION TO THE PLATO TOUCH PANEL (touchp;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
This is a short descriptive program explaining the PLATO touch panel and giving a student practice in using it.
touch panel;5 minutes;anyone

Computer music

THE GOOCH SYNTHETIC WOODWIND (A DEMONSTRATION) (gswdemo;1976;unpublished)
Gooch, Sherwin J; Thomasson, James; Fisher, Norman R
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

This is a demonstration lesson of the Gooch Synthetic Woodwind, which produces music from instructions sent to it by a PLATO IV student terminal. A brief description of the PLATO IV Music System is included.

Gooch Synthetic Woodwind (Music Box);open-ended;general

GSWAIDS (gswaids;1978;unpublished)
Gooch, Sherwin J
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

GSWAIDS and associated files are a group of utility routines that are designed to make use of the Gooch Synthetic Woodwind (GSW), which is a device that produces music from instructions transmitted to it through a PLATO-V Student Terminal.

Gooch Synthetic Woodwind (Music Box);open-ended;general

Computer programming

see Programming languages (Electronic computers)

Computer programs

GRAPHICAL LESSON STRUCTURE DESIGN (csdesign;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Illinois

The lesson provides a "quick and dirty" means to design the calling structure of a lesson.

none;open-ended;college and university students of computer science

A MINI PROGRAMMING SYSTEM FOR INPUT-OUTPUT SUPERVISION (buffering;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Illinois

The program provides a mini language for input/output buffering based on the mini programming system prototype, "csmini".

none;open-ended;college and university students of computer science

MINI PROGRAMMING SYSTEM: PLOTTING RECURSIVELY DEFINED CURVES (csmini;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Ill, Urbana, IL

The lesson provides a mini programming system which can be used to study recursive programs. The supported mini language is designed for simple curve plotting to show that a small program can generate complex graphics. Examples are provided of various types of curves such as Hibert, Sierpinski, and W curves.

none;open-ended;college or university students of computer science

A MINI PROGRAM. SYS.: EXPERIENCE WITH DIJKSTRA'S SEMAPHORES (semaphore; 1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Illinois
The lesson explains the makeup of the mini programing system as a list of real processes and offers practice with several types of subroutine connectives, such as semaphores and synchronizing primitives.
none;open-ended;college and university students of computer science

MINI-PROGRAMMING SYSTEM FOR TREE & LIST MANIPULATION (cstrees;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Ill., Urbana, IL
This lesson allows the student to define binary trees and linked lists in recursive terms and to write and simulate the execution of a program. The execution of the program is shown graphically. Six programs are provided as examples or the student may experiment with his own, altho' he cannot save his program when he exits from the lesson.
none;open-ended;college and university students studying computer science

A MINI-PROGRAMMING SYSTEM: FILING SYSTEM ADMIN. (csminiadm;1976;1978)
Schreiner, Axel T
Computer Science Department, Univ. of Illinois
The program is a utility to control the datasets used by the filing system developed for the mini programming system prototype, "csmini".
none;open-ended;college or university students of computer science

Computer science--Index

COMPUTER SCIENCE LESSONS (cslessons;1975;unpublished)
Friedman, H. George
Department of Computer Science, Univ. of Illinois
The Index of Computer Science Lessons consists of lessons developed by staff and students of the Department of Computer Science at the University of Illinois, Urbana, Illinois, under the ACSES project. Many of the CS lessons may be found individually through the subject and title indexes of the catalog.
none;none;none

Computer simulation

YE OLDE ORIGINAL RACETRACK (racetrack;1973,76;1978)
Nievergelt, Jurg
Computer Science Department, University of Illinois
This lesson consists of five sections, two of which are the games "Ye Olde Racetrack" and "Maxwell's Demon." Both games are simulations and games of skill, with "Racetrack" being a game of speed, as well. Appropriate comments on the subject of simulations are included in a third section of the program.
none;open-ended;college

Computers

Caricatures and cartoons

COMPUTER JOKES (jokes;1977;1978)
Nievergelt, Jurg; Friedman, H. George
Department of Computer Science, University of Illinois
This lesson contains a collection of computer jokes and cartoons.
none;open ended;everyone

Computers--Design and construction

COMPUTER, AN INTRO. TO COMPUTERS, CAI, PLATO FOR NEW AUTHORS (computer;1973;unpublished)
Goldstein, Merle
University of Illinois
This lesson discusses a computer system, some common computer terms, computer-assisted instruction and the nature of the PLATO IV system.
none;open-ended;general

INTRODUCTION TO COMPUTERS (csdemo;1978;unpublished)
Chen, Grace; Wang, Sara
Computer Science Department, Univ. of Illinois
This lesson provides an overview of a computer. From this the user should be able to acquire knowledge of the major components of a computer.
none;none;high school students

A LOOK INTO INTEGRATED CIRCUIT TECHNOLOGY (plogichdw;1976;1978)
Lorenc, Dan; Funk, Bob
Computer Science Dept., University of Illinois
The lesson describes the advantages of integrated circuits over discrete circuitry particularly in reduced size and lower cost. The lesson discusses many aspects of such sophisticated technology.
none;none;college/university

STRUCTURE OF A COMPUTER AND MACHINE LANGUAGE SIMULATION (hypo;1978;1978)
Wunderlich, Bernd
Univ. of Illinois and Universitat Frankfort/M
The lesson presents the basic concept of the construction and operation of a computer by describing a hypothetical computer, HYPO, which has its own machine language with which the student can practice programming and can see how the operation codes execute.
none;open-ended;secondary, college or university students

Computer-assisted instruction

COMPUTER, AN INTRO. TO COMPUTERS, CAI, PLATO FOR NEW AUTHORS (computer;1973;unpublished)
Goldstein, Merle
University of Illinois
This lesson discusses a computer system, some common computer terms, computer-assisted instruction and the nature of the PLATO IV system.
none;open-ended;general

PLATO AND INSTRUCTIONAL DESIGN (esl;1975;unpublished)
Steinberg, Esther R
Comp.-based Educ. Res. Lab., Univ. of Illinois
This lesson focuses on instructional design problems that are unique to PLATO or that require special attention or consideration on PLATO.
none;none;PLATO lesson authors

SOME THOUGHTS ON STYLE AND TECHNIQUES OF LESSON WRITING (style;1973;1977)
Nievergelt, Jurg
Department of Computer Science, University of Illinois
This lesson offers suggestions to authors writing PLATO lessons. The sections of the lesson include introductory comments, DO's of lesson writing, DON'Ts of lesson writing and some further ideas about successful lessons.
none;15 minutes;PLATO authors

WRITING PLATO LESSONS: DO'S AND DON'TS (es;1975;unpublished)
Steinberg, Esther R
Comp.-based Educ. Res. Lab., Univ. of Illinois
This lesson demonstrates some do's and don'ts that authors may find useful when writing and/or improving PLATO lessons.
none;none;PLATO lesson authors

Conducting

MUSICAL TERMS FOR STUDENT CONDUCTORS (conductl;1976;1977)
Peters, G. David
School of Music, University of Illinois
This lesson has been designed as a review of musical terms necessary for the understanding of standard musical scores. The lesson has been written in several sections, and may be reviewed by section before moving to the final, randomized exam.
none;none;university level

Conformal representation

--of organic compounds

CONFORMATIONAL REPRESENTATION OF ORGANIC COMPOUNDS (conform;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The program introduces three dimensional representation of the structure of carbon compounds: conformations of ethane, propane, and butane, energy barriers to rotations about single bonds, and Newman projection formulas.
none;24 minutes;college/university students

STRUCTURE AND CONFORMATION OF CYCLOALKANES (cyclo;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson deals with nomenclature and conformations of some common cycloalkanes. It includes three dimensional representation of molecules, conformation of ethane, propane and butane, energy barriers to rotations about single bonds and Newman projection formulas.
none;24 minutes;college/university students

Consonants

CONSONANT SYMBOLS (sound2;1976,1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois
This lesson acquaints the student with the consonant symbols used in the dictionary pronunciation guide.
none;30 minutes;First year college English students

Constellations

CONSTELLATION STUDY (cdcstar;1979;1979)
Avner, Elaine
Comp.-based Educ. Res. Lab., U of I, Urbana
This lesson on constellations will plot 23 constellations and provide certain information for each, i.e., latitude, hour angle, azimuth and altitude, as well as the names of major stars. There is a drill available. The user may also plot any constellation by providing information as to the position of the stars.
none;open-ended;grade 9 and over interested in study of constellations

Continental drift

NEW GLOBAL TECTONICS AND CONTINENTAL DRIFT (earth;1975;unpublished)
Scotese, Christopher
University of Illinois Circle Campus, Chicago, Ill.
This lesson presents a unifying, working hypothesis called plate tectonics, which provides a kinematic model of the upper layer of the earth. It can be used to make quantitative predictions about most phenomena studied by the different disciplines of the earth sciences.
none;open-ended;students of earth sciences

Contract bridge

CONTRACT BRIDGE (contract;1976;1977)
Wolff, Martin; Woolley, David R
Comp.-based Educ. Res. Lab., University of Illinois
This is an on-line version of Contract Bridge which can be played between terminals and/or the computer.
none;open-ended;none

Contracts

THE STATUTE OF FRAUDS (pfrauds;1978;unpublished)
Maggs, Peter B; Platt, Robert C
College of Law, University of Illinois, Urbana, Ill.
The lesson is a review of the Statute of Frauds designed for students who have already some familiarity with the statute. The student is asked questions based on various situations which might arise in contracts to which the Statute of Frauds applies.
none;open-ended;first year students of law

Convulsions

ADULT ONSET SEIZURES: DIFFERENTIAL DIAGNOSIS (tumor;1978 ;unpublished)
Patterson, Virginia; Nelson, Charles D; Stepanek, David; et al.
Abraham Lincoln Medical School, Univ. of Illinois
In this simulation Andy Workman, a 26-year-old white male, has had a single convulsion and has come into the office for help. The student must do a complete workup, including history, lab, physical, and also treat him in the hospital, using chemotherapy, radiation therapy, or other options.
optional microfiche;35 minutes;medical students

Coordinates

AXES, POINTS, LINES, PLANES (axes;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL
The lesson, first in the crystallography series, presents the mathematical representation of points, lines and planes in the everyday 3-D coordinate system used by crystallographers, both classical and X-ray. Part 4 of the lesson introduces the method by which an oblique axial system is utilized in building up a crystal structure.
none;none;college and university undergraduate and graduate students

TRANSFORMATION OF COORDINATES (atrans;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
The final lesson in the series on Elementary Crystallography is one which teaches the analysis of the change in the coordinates of points and the Miller indices of planes brought about by a specified change of axes.
none;none;college and university undergraduate and graduate students

Coordinates, Oblique

AXES, POINTS, LINES, PLANES (axes;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL
The lesson, first in the crystallography series, presents the mathematical representation of points, lines and planes in the everyday 3-D coordinate system used by crystallographers, both classical and X-ray. Part 4 of the lesson introduces the method by which an oblique axial system is utilized in building up a crystal structure.
none;none;college and university undergraduate and graduate students

Coordinates (Algebra)

BATTLESHIP (ccbattle;1976;1978)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
The lesson provides remediation on plotting points if student fails the checkup in =cctttest=.
none;30 minutes;intermediate algebra students

FRACTIONS ON THE NUMBER LINE (rfrac;1976;1978)
Bailey, Keith
Comp.-based Educ. Res. Lab., Univerity of Illinois
This lesson teaches how to locate fractions on the number line and shows how this model can be used for comparing ing fractions, determining equivalent fractions and converting improper fractions to mixed numbers. It also demonstrates the relationship between division and fractions.
none;40 minutes;basic mathematics students

FUNCTION PLOTTER (ccplot;1976;1978)
Bailey, Keith; Sleator, Daniel
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a function plotter for mathematics students to use.
none;open-ended;mathematics students, high school and above

GRAPHING ANY LINE IN THE FORM $y = mx + b$ (line3;1975;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
The lesson provides practice in using the slope and intercept to find the equation of a given straight line or to graph a given linear equation.
none;30 minutes;students of intermediate algebra

GRAPHING LINES IN THE FORM $ax + by + c = 0$ (line5;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson enables the student to convert a linear equation in the form $ax + by + c = 0$ to the form $y = mx + b$ and thereby identify its slope and intercept and be able to graph it.
none;60 minutes;intermediate algebra students

HOW TO PLOT POINTS (remttt;1976;1978)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides remediation in plotting points for students who have failed the checkup in =cctttest= several times.
none;30 minutes;intermediate algebra students

INTERCEPT OF STRAIGHT LINES (line2;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the y-intercept and provides instruction and practice in finding it from the graph of a linear equation.
none;15 minutes;intermediate algebra students

THE LINES $y = b$ AND $x = c$ (line4;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the lines $y = b$ and $x = c$ and drills the student in graphing any such equation and in finding the equation of any horizontal or vertical line.
none;30 minutes;intermediate algebra students

PLOTTING POINTS CHECKUP (cctttest;1976;1978)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a checkup on the student's ability to plot points.
none;15 minutes;intermediate algebra students

POINT-SLOPE FORM (linela;1976;1978)
Lederman, Barbara; Bailey, Keith; McFadden, LaVerne; et al.
Comp.-based Educ. Res. Lab., University of Illinois
Given two points or one point and the slope, the student will be able to write an equation of the corresponding line.
none;30 minutes;intermediate algebra students

SLOPE OF A LINE (line2a;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the slope and provides instruction and practice in finding it from the graph of a linear equation.
none;30 minutes;intermediate algebra students

TIC-TAC-TOE (ccttt;1976;unpublished)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches plotting points on a grid by using a tic-tac-toe game format.
none;30 minutes;intermediate algebra students

Coordinates (Arithmetic)

PARK YOUR CAR (stories;1972;1977)
Steinberg, Esther R
Computer-based Educ. Res. Lab., Univ. of Illinois

The lesson is about coordinates. It is intended to familiarize the student with basic ideas of the coordinate system. It uses a familiar setting, a parking lot for cars. Axes are represented by streets and the locations on the system are parking spaces, which are identified in terms of distance and direction from the streets.

none;30-45 minutes;elementary school children, fourth grade level

Cor pulmonale

CIRCULATORY DISORDERS OF THE RESPIRATORY SYSTEM (congest;1976;unpublished)
Perrymore, W. Dale; McCraw, Gordon W; Leveridge, C. Tony
Oklahoma University Health Sciences Center

This lesson covers pathological and clinical aspects of various circulatory diseases of the respiratory system. Included are CPC, cor pulmonale, pulmonary embolism, edema infarcation and hypertension. The material is presented in a highly indexed outline format, facilitating access to each specific area.

optional touch panel;30 minutes;first year medical students

Correlation (Statistics)

CORRELATION AND REGRESSION (elstat10;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.

This lesson describes correlation and regression, familiarizes the student with how scatter diagrams for different degrees should look and describes how correlation and regression are useful in formulating predictions.

none;open-ended;college/university students

CORRELATION AND REGRESSION ANALYSIS (reganal;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois

This lesson teaches the use of regressional analysis to find the functional relationship between two variables.

none;none;psychology students

Cost accounting

BREAK-EVEN ANALYSIS (cost1;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.

This lesson reviews break-even analysis and shows how cost and revenue curves are used in managerial decision making.

none;45 minutes;introductory accountancy students

COST CLASSIFICATION (cost2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson analyzes cost classification by designating costs according to the way in which they can be allocated to the product.
none;10-15 minutes;introductory accounting students

COST VS EQUITY (equity;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the student when and how to use the cost and equity methods of accounting for ownership in long term stock investments.
none;30 minutes;introductory accounting students

INCREMENTAL ANALYSIS (increm;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson explains the use of incremental analysis to make a choice between alternative courses of action.
none;15-20 minutes;introductory accounting students

INTRODUCTION TO COST ACCOUNTING (cost;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides a review of cost accounting information previously covered in other courses and extends the material on cost accounting beyond what is covered in the classroom.
none;45 minutes;introductory accounting students

JOB-ORDER COSTING (tab3; 1978;unpublished)
McKeown, James C
Department of Accountacy, U of I, Urbana, Ill.
This is to review the elements of job order costing and to give the student practice applying overhead and making the account entries involved in job order costing.
none;60 minutes;introductory accounting students

PROCESS COSTING (cost3;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson is a review of the product costing aspects of cost accounting as used for inventory valuation and income determination and as a basis for pricing.
none;60-90 minutes;introductory accounting students

STANDARD COSTING I (std1;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson introduces the aspects of standard cost related to direct materials, direct labor and manufacturing overhead.
none;15 minutes;introductory accounting students

STANDARD COSTING II (standard;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson illustrates the application of standard costing and familiarizes students with the analysis and recording of material and labor price (rate) and usage (efficiency) variances.
none;45 minutes;introductory accounting students

Cough

PROBLEM SOLVING IN CLINICAL MEDICINE: COUGH (feinz3;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 47-year-old man with a progressively worsening cough and shortness of breath. The user is a student physician working for an ambulatory care facility who has been assigned to this man. Choices are made from options provided and each selection is discussed.
none;none;medical students

Counseling

DILEMMA COUNSELING SYSTEM (dilemma;1974;1978)
Wagman, Morton; Kerber, Kenneth W
Counseling Center, University of Illinois
The system described in the lesson teaches a method for solving life-choice problems, and provides counseling for a current psychological dilemma. The lesson gives practice in phrasing dilemma problems, generates solutions to these dilemmas and then allow the method to be applied to a personal problem of the student.
none;open-ended;high school age and older

Counting

see Arithmetic

Crossing over (Genetics)

GENE MAPPING IN DIPLOID ORGANISMS (cover;1973;unpublished)
Scotese, Karen Frank
University of Illinois Circle Campus, Chicago, Ill.
This lesson discusses crossover and gene mapping and follows with practice problems.
none;60-90 minutes;biology students and persons interested in genetics

Crossword puzzles

WELCOME TO CROSSWORD (crosswdn;1979;unpublished)
Melohn, Bill
University of Southern California
This lesson contains an on-line crossword puzzle. The puzzle is periodically changed and answers to the last puzzle are provided.
none;open-ended;general

Cruelty to children

MEDICAL LEGAL PROBLEMS IV: THE ABUSED AND NEGLECTED CHILD (childabuse;1978;unpublished)
Ehrhardt, Melvin E; Costigan, Joe; Green, Michael
School of Basic Medical Sciences, Univ. of Illinois
The provisions of the Illinois Abused and Neglected Child Reporting Act are presented in this lesson. Questions are provided to ensure knowledge of the act and its implications in real situations. Case studies lead the student as physician through identification, reporting, and follow-up for cases involving possible neglect and abuse.
none;10-15 minutes;medical students

Cryoscopy

MOLECULAR WEIGHT DETERMINATION BY FREEZING POINT METHOD (freeze;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson teaches the theory of freezing point depression when a solute is added to a solvent, and then the student performs a simulated experiment on the freezing point depression of benzene solutions.
none;81 minutes;students of general chemistry

Crystal lattices

AXES, POINTS, LINES, PLANES (axes;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL
The lesson, first in the crystallography series, presents the mathematical representation of points, lines and planes in the everyday 3-D coordinate system used by crystallographers, both classical and X-ray. Part 4 of the lesson introduces the method by which an oblique axial system is utilized in building up a crystal structure.
none;none;college and university undergraduate and graduate students

CONSTRUCTION OF A GNOMONIC PROJECTION (gnocel;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
The seventh crystallography lesson allows the student to construct a gnomonic projection including any crystal planes he choses. The projection can be compared with that made from data from a crystal measured with the optical goniometer (Lesson VI). The lesson is a valuable exercise in visualizing the orientation of the axes and planes of crystals.
none;none;college and university undergraduate and graduate students

THE RECIPROCAL LATTICE (rcplt;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL
The lesson, the second in the series of lessons on Elementary Crystallography, introduces the concept of the reciprocal lattice in order to permit its application to the calculations in the lesson on the Metric Tensor and the representation of the geometry of planes in the lessons on the Use of the Optical Goniometer and Gnomonic Projections.
none;none;college and university undergraduate and graduate students

TRANSFORMATION OF COORDINATES (atrans;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
The final lesson in the series on Elementary Crystallography is one which teaches the analysis of the change in the coordinates of points and the Miller indices of planes brought about by a specified change of axes.
none;none;college and university undergraduate and graduate students

Crystallization

PURIFICATION BY CRYSTALLIZATION (cry2;1972;1977)
Smith, Stanley
Chemistry Department, University of Illinois
In this lesson, a simulated laboratory experiment, the student is asked to purify a sample of napthalene by recrystallization from methanol. The sample contains both soluble and insoluble impurities. The steps in the purification are outlined and solubility data for napthalene in methyl alcohol is given to aid the student.
none;27 minutes;college/university students

PURIFICATION OF ORG. COMPOUNDS BY CRYSTALLIZATION (crystal;1976,1978;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson reviews some aspects of purification of organic compounds by recrystallization.
none;22 minutes;college/university students

Crystallography, Mathematical

AXES, POINTS, LINES, PLANES (axes;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL
The lesson, first in the crystallography series, presents the mathematical representation of points, lines and planes in the everyday 3-D coordinate system used by crystallographers, both classical and X-ray. Part 4 of the lesson introduces the method by which an oblique axial system is utilized in building up a crystal structure.
none;none;college and university undergraduate and graduate students

CONSTRUCTION OF A GNOMONIC PROJECTION (gnocel;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL

The seventh crystallography lesson allows the student to construct a gnomonic projection including any crystal planes he choses. The projection can be compared with that made from data from a crystal measured with the optical goniometer (Lesson VI). The lesson is a valuable exercise in visualizing the orientation of the axes and planes of crystals.

none;none;college and university undergraduate and graduate students

ELEMENTARY CRYSTALLOGRAPHY (elcrysta; 1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL

This lesson is the introduction to a series of lessons presenting methods of utilizing X-ray crystallographic data in the solution of chemical problems. The series is divided into three sections which are described in option (a) (Further Information) below.

none;none;college or university undergraduate and graduate students

INTRODUCTION TO THE GNOMONIC PROJECTION (gnompr;1977;unpublished)
Curtin, David Y
Chemistry Dept., U. of Illinois, Urbana IL

The lesson, fifth in the Crystallography series, introduces the gnomonic projection as a method of visualizing the three-dimensional arrangement of vectors and planes.

none;none;college and university undergraduate and graduate students

THE METRIC TENSOR (metens;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL

The lesson, number four in the Elementary Crystallography course, describes the metric tensor and its use in the calculation of bond angles, bond distances, and other geometrical relationships. The lesson ends by turning the PLATO computer into a calculator which uses matrix algebra to make geometric calculations in a general crystallographic system.

none;none;college and university undergraduate and graduate students

THE RECIPROCAL LATTICE (rcplt;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL

The lesson, the second in the series of lessons on Elementary Crystallography, introduces the concept of the reciprocal lattice in order to permit its application to the calculations in the lesson on the Metric Tensor and the representation of the geometry of planes in the lessons on the Use of the Optical Goniometer and Gnomonic Projections.

none;none;college and university undergraduate and graduate students

REVIEW OF MATRICES (matx;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL
The lesson, besides being a review of matrices, includes matrix calculations needed to carry out the calculations in Lessons IV-VIII of the course in Elementary Crystallography. A matrix inversion program uses the PLATO computer and the last section provides a working computer program for the solution of three simultaneous equations in three unknowns.
none;none;college and university undergraduate and graduate students

TRANSFORMATION OF COORDINATES (atrans;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
The final lesson in the series on Elementary Crystallography is one which teaches the analysis of the change in the coordinates of points and the Miller indices of planes brought about by a specified change of axes.
none;none;college and university undergraduate and graduate students

USE OF THE OPTICAL GONIOMETER (goniom;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
The sixth crystallography lesson instructs in the measurement of the angles between the faces of a crystal with a two-circle goniometer, presenting the results as a gnonomic projection. A working simulation of a goniometer allows measurement of the angles between faces of a simulated crystal, showing the collected data as a gnomonic projection.
none;none;college and university undergraduate and graduate students

Curricula

see Catalogs

Curves

TRANSFORMATION, Z-SCORES AND THE NORMAL CURVE (elstat9;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson presents information about transformations and furnishes the formula for finding z-scores. Then the user is introduced to the normal curve and creates examples of his own.
none;open-ended;college/university students

Cycles

BIOGEOCHEMICAL CYCLES (biogeo;1977;1978)
Baillie, Robert; Hyatt, Gary
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

This lesson dicusses the four most important biogeochemical cycles on earth. As the student goes through the lesson he is told to look for two things: 1) how each element gets back to where it started and 2) what would happen if part of the cycle were destroyed.

none;20 minutes;college/university students

Cyrillic alphabet

THE CYRILLIC ALPHABET (ralphl;1976;1977)
Curtin, Constance O; Dawson, Clayton L
Comp.-based Educ. Res. Lab., University of Illinois

This lesson will acquaint the student with the Cyrillic alphabet and help in providing practice in reading Russian words.

audio discs;4 hours (4 lessons);high sch/college/university

Cytology

CYTOLOGY (cyter;1974;1978)
Silver, John; Shales, Thomas; Kenner, Gerry H
College of Veterinary Medicine, Univ. of Illinois

The lesson provides instruction in cell physiology and structure for students in a beginning course in histology. Material in the lesson is based on Arthur W. Ham's Histology, 7th edition, Lippincott, Philadelphia (1974).

none;none;none

Dairy products--Analysis and examination

VETERINARY PUBLIC HEALTH ASPECTS OF MILK AND DAIRY PRODUCTS (milkp;1974;1978)
Grimes, George M; Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois

The lesson provides a general knowledge of the veterinary public health aspects of defense against disease from milk and dairy products. The various sources of contamination and adulteration are indicated, the defenses appropriate to prevent disease, and the inspection responsibility and authority.

none;2 hours;professional students of veterinary medicine

Dance notation

CONTACT, SHIFT OF WEIGHT, FRONT (movement4;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.

This lesson discusses the notation of contact, shift of weight and front for purposes of movement analysis. It is last in a series of six lessons dealing with the Eshkol-Wachmann Movement Notation System.

none;approximately 30-40 minutes;college/university students

ESHKOL-WACHMANN MOVEMENT NOTATION, LESSON 2 (movement;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.
This lesson introduces the Eshkol-Wachmann Movement Notation System and presents the study material in such a way that students who have little or no knowledge of this notation system can acquire a basic knowledge of its symbols and their meanings, and be able to interpret certain positions and movements. Lesson two in a series of six.
none;approximately 30-40 minutes;college/university students

ESHKOL-WACHMANN MOVEMENT NOTATION SYSTEM (moveintro;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.
This lesson introduces the student to the Eshkol-Wachmann Movement Notation System, which is an instrument of communication, a means of recording all types of movement and a tool for analysis of movement. This is the first in a series of six lessons.
none;approximately 30-40 minutes;college/university students

MOVEMENT NOTATION (movement1;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.
This lesson discusses movement notation as a symbolic language for the description of human movement and the identifying system of reference. Lesson three in a series of six teaching the Eshkol-Wachmann Movement Notation System.
none;approximately 30-40 minutes;college/university students

PLANE MOVEMENTS (movement2;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.
This lesson discusses movements in horizontal planes, vertical planes and intermediate planes. This is number four in a series of six lessons teaching the Eshkol-Wachmann Movement Notation System.
none;approximately 30-40 minutes;college/university students

SIMULTANEOUS AND CONICAL MOVEMENTS (movement3;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.
This lesson discusses simultaneous movement, meaning movement of adjacent limbs at the same time or simultaneous changes in interrelationship of a group of adjacent limbs, and conical movement, where the sense of movement is determined by looking from the joint of the limb and outward. Lesson five of the Eshkol-Wachmann Movement Notation System.
none;approximately 30-40 minutes;college/university students

Datasets

Editor

DATASET SEARCH (dsearch;1976;unpublished)
Galcher, William M
University of Illinois
This utility program can search files which are in "dedit" type format.
none;open-ended;authors of PLATO lessons

DATASET UTILITY PACKAGE (dsedit;1976;1977)
Galcher, William M
University of Illinois
This is a utility program. It is an editor to manipulate datasets.
none;open-ended;none

DEDIT FILE PRINT FORMATTER (dprint;1976;unpublished)
Galcher, William M
University of Illinois
This lesson is designed to provide the user with the ability to format a "dedit" type dataset so that it may be printed by the system printer.
none;open-ended;authors of PLATO lessons

TRANSFERRAL OF DATA (transfr;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., Univ. of Illinois
The program gives instructions to help TUTOR authors transfer data between many types of databases, i.e. datasets and namesets.
none;open-ended;PLATO authors and instructors

Death

DEATH AND DYING: PSYCH. MANAGEMENT OF THE TERMINAL PATIENT (death;1976;unpublished)
Ruggieri, Pamela J; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development
This lesson provides a short introduction to the work of Kubler-Ross, followed by a didactic simulation of counseling a terminal patient, Mr. Kraft. Mr. Kraft makes statements and the student must pick from the replies provided. Analysis questions are asked about each of the choices. The case is summarized at the end.
none;none;medical students, any health professional

Debugging in computer science

BUFFER DISPLAY - DEBUGGING OPTION (showit;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., University of Illinois
The program is a debugging utility which lets the programmer quickly display everything in a buffer so as to locate data.
none;open-ended;PLATO authors

EXECUTION ERROR LOCATOR (execfind;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., Univ. of Illinois
The program is a utility program to enable TUTOR authors to locate execution errors in TUTOR lessons.
none;open-ended;authors working with the TUTOR language

RECOVER-A-CHARSET ROUTINE (recover;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., University of Illinois
The program instructs the user in how to recover a "charset" that has been accidently deleted from a TUTOR program. The program also shows how to convert a large "charset" to "char" commands.
none;open-ended;none

RECOVER-A-LINESET ROUTINE (recoverl;1978;unpublished)
Prouty, Richard M
Chemistry Dept., Univ. of Illinois, Urbana, IL
The program is a utility which will recover an accidentally deleted lineset. It will also convert a large lineset to -rdraw- commands.
none;open-ended;PLATO authors

Decision-making

DILEMMA COUNSELING SYSTEM (dilemma;1974;1978)
Wagman, Morton; Kerber, Kenneth W
Counseling Center, University of Illinois
The system described in the lesson teaches a method for solving life-choice problems, and provides counseling for a current psychological dilemma. The lesson gives practice in phrasing dilemma problems, generates solutions to these dilemmas and then allow the method to be applied to a personal problem of the student.
none;open-ended;high school age and older

Deformities

MULTIPLE CONGENITAL DEFORMITIES: MANAGEMENT AND PROGNOSIS (lumpy;1977;unpublished)
Trotter, David; Barmada, Riad; Nelson, Charles D
Abraham Lincoln School of Medicine, Univ. of Illinois
This lesson is a simulated case study of an infant girl with multiple congenital deformities. The student is guided through a series of tests and treatments to diagnose her problem and correct the defects. Questions are asked about procedures at various points in the lesson.
microfiche;none;medical students

Demography

AGE STANDARDIZATION (engrow;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

This lesson demonstrates the techniques used to calculate age standardized mortality and fertility rates. The purpose of the standardization procedure is to determine a relationship between two or more variables while eliminating the influence of other variables.

none;open-ended;persons interested in populations

DEMOGRAPHIC METHODOLOGY PROGRAMS (lessindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

This lesson consists of self-contained programs designed to demonstrate various aspects of demographic methodology. The user may work through each of the programs on an individual basis.

none;open-ended;persons studying populations

ECONOMIC DEVELOPMENT TWO SEX VERSION (riley;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using variables of two sex (male and female) economic development can be graphed. A list of available regions is provided and the variables can be changed for each projection.

none;open-ended;persons studying populations

GENERAL PURPOSE MODEL (gmodel;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this general purpose model lesson, projections of the number of any population-related quantity and its cost in dollars can be graphed. A list of available regions is provided, and the variables and parameters can be changed in each projection.

none;open-ended;persons studying populations

HISTORICAL POPULATION GROWTH MODEL (popoil;1976;unpublished)
Population Dynamics Group: Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using historical population growth variables can be graphed. Lists of available regions are provided, and variables and parameters can be changed in each projection.

none;open-ended;persons studying populations

HOW TO PROJECT A POPULATION (popcal;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This lesson explains in great detail the projection techniques used in the population projection program.
none;open-ended;persons studying populations

ILLINOIS DEMOGRAPHIC DATA (statistics;1979;unpublished)
Berger, Michael
Center for Advanced Study, University of Illinois
This is an interactive lesson allowing even a novice user to plot data about Illinois counties, legislative districts, and other states. Data includes information about population breakdown, education funding, taxes, and federal aid.
touch panel;open-ended;persons interested in law, political science,government

LIFE TABLES (ltable;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This life table lesson is a simplified model of the life history of a group of people as it is diminished gradually by deaths.
none;open-ended;persons studying populations

MIGRATION AND URBANIZATION MODEL (migl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using migration and urbanization variables can be graphed. Both internal and international migration can be examined. Variables can be changed for each projection.
none;open-ended;persons studying populations

POPULATION DENSITY MODEL (foodindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using population density variables can be graphed. A list of available regions is provided and the variables for each projection can be changed.
none;open-ended;persons studying populations

POPULATION DYNAMICS WORKBOOK (plesl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This lesson is a workbook designed to assist in the study of the Population Dynamics package. Ten main questions and two supplementary questions are provided, covering many aspects of population projection.
hard copy workbook;open-ended;persons interested in populations

POPULATION PROJECTIONS MODEL (populj2;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using numerous population variables can be graphed. Lists and maps of available regions are provided. The variables and parameters can be changed in each projection.
none;open-ended;persons interested in populations

TWO SEX POPULATION PROJECTION MODELS (twosex1;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using two sex population variables can be graphed. Lists of available geographical regions are provided and the variables and parameters changed in each projection.
none;open-ended;persons interested in populations

UNITED STATES FOOD PRODUCTION MODEL (usfood;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using United States food production variables can be graphed. A list of the available regions is provided and variables can be changed for each projection.
none;open-ended;of general interest

Demography--Problems, exercises, etc.

POPULATION DYNAMICS WORKBOOK (ples1;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This lesson is a workbook designed to assist in the study of the Population Dynamics package. Ten main questions and two supplementary questions are provided, covering many aspects of population projection.
hard copy workbook;open-ended;persons interested in populations

Dental anatomy

TOOTH STRUCTURE (shp81;1975;unpublished)
Fincher, Brad
Sheppard Air Force Base, Texas
This four-part lesson discusses tooth layers, pulp of the tooth, tooth landmarks and supportive structures, with a drill at the end. A pronunciation key is provided.
none;2 hours;dental assistants

Dental pulp

TOOTH STRUCTURE (shp81;1975;unpublished)
Fincher, Brad
Sheppard Air Force Base, Texas
This four-part lesson discusses tooth layers, pulp of the tooth, tooth landmarks and supportive structures, with a drill at the end. A pronunciation key is provided.
none;2 hours;dental assistants

Dentistry--Study and teaching

TOOTH STRUCTURE (shp81;1975;unpublished)
Fincher, Brad
Sheppard Air Force Base, Texas
This four-part lesson discusses tooth layers, pulp of the tooth, tooth landmarks and supportive structures, with a drill at the end. A pronunciation key is provided.
none;2 hours;dental assistants

Depression, Mental

AFFECTIVE ILLNESS AND THEIR CAUSES AND TREATMENT (nursing19;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
This lesson discusses various aspects of affective illnesses and their causes and treatment. The method used in this lesson is the presentation of material followed by one or more questions.
none;none;nursing students

THE DEPRESSED PATIENT: A SIMULATED PATIENT CARE PROBLEM 1 (nursing6;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. School, Chicago, Il.
This is a depressed patient care problem. The goal of the lesson is to apply principles of intervention for depressed patients. The format of the problem is an opening scene followed by a number of sections. In each section you are required to make a decision about intervention and you will be informed of the consequences of your action.
none;10-15 minutes;nursing students

THE DEPRESSED PATIENT: A SIMULATED PATIENT CARE PROBLEM 2 (nursing16;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. School, Chicago, Il.
This is a depressed patient care problem. The goal of the lesson is to apply principles of intervention for depressed patients. The format of the problem is an opening scene followed by a number of sections. In each section you are required to make a decision about intervention and you will be informed of the consequences of your action.
none;none;nursing students

Dermatomes

INTRO. TO THE HUMAN NERVOUS SYSTEM: DERMATOMES (derma;1976;unpublished)
Wadsworth, Gladys E; McDiarmid, Melissa A
School of Medicine, Univ. of Maryland, Baltimore

This lesson defines the term "dermatome" and presents schematically the effect of overlapping of contiguous segments. It illustrates the dermatomal pattern of the upper limb and compares the sensory innervation of a spinal nerve with that of a peripheral nerve.

none;15 minutes;first year medical students

Determinants

DETERMINANTS AND MATRIX CONVERSION (ymatinv;1976;1978)
Tatsuoka, Kikumi; Baillie, Robert
Comp.-Based Educ. Res. Lab., Univ. of Ill.

The lesson is one in the series on "Matrix Algebra for Multivariate Statistics". The lesson presents the properties of determinants of a matrix, and ends with exercises for the student.

none;none;college/ university students

Diabetes

DIABETES INSIPIDUS (insipid;1978;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the Univ. of Illinois

Upon completion of this lesson the student should understand the causes, clinical presentation, etiology, diagnosis and treatment of diabetes insipidus. A clinical quiz of 8 cases of hypotonic polyuria gives the student a chance to apply this knowledge.

none;none;medical students

DRUGS: INSULIN AND ORAL HYPOGLYCEMIC AGENTS (kumc58;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson provides some background material on diabetes and discusses the effects of insulin and other oral hypoglycemic agents on the condition.

none;10 minutes;first year medical students

Diabetes--Oral therapy

DRUGS: INSULIN AND ORAL HYPOGLYCEMIC AGENTS (kumc58;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson provides some background material on diabetes and discusses the effects of insulin and other oral hypoglycemic agents on the condition.

none;10 minutes;first year medical students

Diagnosis

ADULT ONSET SEIZURES: DIFFERENTIAL DIAGNOSIS (tumor;1978 ;unpublished)
Patterson, Virginia; Nelson, Charles D; Stepanek, David; et al.
Abraham Lincoln Medical School, Univ. of Illinois

In this simulation Andy Workman, a 26-year-old white male, has had a single convulsion and has come into the office for help. The student must do a complete workup, including history, lab, physical, and also treat him in the hospital, using chemotherapy, radiation therapy, or other options.

optional microfiche;35 minutes;medical students

AND EVERYTHING NICE (oventroubl;1977;unpublished)
Arab, Morsi M; Kemp, Larry; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development

In this simulation, a 32-year-old pregnant secretary comes into the office with nausea, fainting and other distress. She is in her seventh month. The student must gather history, physical and lab data, make a diagnosis, prescribe treatment, and manage complications. Clinical knowledge questions are interjected to provide didactic supplement to the problem.

none;25 minutes;medical students

AUTOMATED CHEM II: INTRODUCTION TO THE SMA 12/60 (sma12;1978;unpublished)
Przepiorka, Donna; Ressler, Newton; Law, Ricky M
Abraham Lincoln Medical School, Univ. of Illinois

The purpose of this lesson is to acquaint the student with the SMA 12/60 laboratory test. It is similar in design and format to PLATO lesson "Automated Chem I: Introduction to the SMA 6/60."

microfiche;30 minutes;medical students and students of medical technology

AUTOMATED CHEM I: INTRODUCTION TO THE SMA 6/60 (sma660;1978;unpublished)
Przepiorka, Donna; Ressler, Newton; Law, Ricky M
Abraham Lincoln Medical School, Univ. of Illinois

The purpose of this lesson is to acquaint the student with the usefulness and limitations of the SMA 6/60. A modicum of knowledge of basic pathophysiology is necessary to analyze the data presented. The program emphasizes the sources of technical error as well as special methods of analysis. Clinical case studies are included.

microfiche;30 minutes;medical students and students of medical technology

BASIC VIROLOGY III: VIRAL DIAGNOSTIC TECHNIQUES (kvirus4;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson presents information the physician must consider for appropriate specimen collection in suspected viral infections. Via tutorial and quiz formats, various tests are utilized in diagnosing viral infections and the interpretation of the test results are presented.

none;20 minutes;first year medical students

CASE HISTORY: MANAGEMENT OF HYPERTENSION (kumc36;1975;unpublished)
Kansas University Medical Center; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois
This lesson simulates the examination, diagnosis and treatment of an hypertensive patient. Discussion of therapeutic agents is provided.
none;15 minutes;first year medical students

THE CASE OF THE AILING ALIEN (montezuma;1978;unpublished)
Blecka, Lawrence J; Nelson, Charles D
Abraham Lincoln Medical School, Univ. of Illinois
In this simulation, Jose Amateo comes into the office with his cousin Pedro as translator. Jose has just arrived from rural Mexico within the past few days and has stomach pains, diarrhea and other discomfort. The student must gather history, lab and physical data, make a diagnosis, and treat the patient.
microfiche;none;medical students

THE CASE OF THE KISSING TELLER (percival;1977;unpublished)
Alora, Angeles; Kemp, Larry; Nelson, Charles D; et al.
U of I Medical School, Cntr. for Ed. Development
In this doctor's office simulation, Percival Snoot has come in complaining of a burning sensation at the tip of his penis. The student takes medical history, physical and lab data, and offers treatment. In addition, the sexual contacts must be followed up and treated for venereal problems of their own.
optional microfiche ;30 minutes;medical students

CASE STUDIES IN COAGULATION II: THE GIRL IN THE DORM (coag2;1976;unpublished)
Rodriguez-Erdmann, Franz; Bonetti, William
Abraham Lincoln Medical School, Univ. of Illinois
This lesson simulates a doctor being called to a college dormitory to see an 18-year-old female because she has been feeling ill for a few days. Her complaints are a cold, blurred vision and a rash. The student must diagnose and recommend treatment for the patient.
none;none;medical students

CASE STUDIES IN COAGULATION I: THE STREET FIGHT (coag1;1976;unpublished)
Rodriguez-Erdmann, Franz; Bonetti, William
Abraham Lincoln Medical School, Univ. of Illinois
This lesson presents questions and answers dealing with a case of hemophilia in a 19-year-old male. Lesson asks questions concerning proper procedure in the workup and management of the patient and specific questions concerning lab tests and questions about hemophilia and von Willebrand's disease.
none;15 minutes;medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT I (kumc31;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson presents the student with a sick patient, symptoms, medical history and laboratory reports, and asks that the student make a diagnosis.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT II (kumc40;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents several patients to the student, describes the illnesses, and provides discussion of the therapies and medications that have been prescribed by "Dr. PLATO".
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT III (kumc24;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry
University of Kansas / University of Illinois
This lesson presents patients and symptoms, and asks the student to practice making diagnoses and prescribing treatment.
none;10 minutes;first year medical students

CHRONIC BRONCHITIS (shp108;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson presents the one major factor in developing chronic bronchitis. The student will also learn to determine whether or not an individual has chronic bronchitis and what are the proper modes of therapy for the patient.
none;60-90 minutes;physicians' assistants

DIABETES INSIPIDUS (insipid;1978;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the Univ. of Illinois
Upon completion of this lesson the student should understand the causes, clinical presentation, etiology, diagnosis and treatment of diabetes insipidus. A clinical quiz of 8 cases of hypotonic polyuria gives the student a chance to apply this knowledge.
none;none;medical students

DIAGNOSE: A GAME OF DEDUCTIVE SKILL (diagnose;1976;unpublished)
Solomon, Lawrence; Yamada, Mitsuru; Bonetti, William; et al.
Abraham Lincoln Medical School, Univ. of Illinois

This lesson provides a deductive medical detective game that presents the student with a triad of complaints and a list of 60 diseases. Diseases not fitting the complaint must be eliminated. A triad of history items, a triad of physical items and a definitive triad of laboratory findings offer more data.

none;20 minutes;medical students

DIFFERENTIAL DIAGNOSIS GI HEMORRHAGE (gihem;1975;unpublished)
Trachtenbarg, David E; Poncher, Randy
Abraham Lincoln School of Medicine, Univ. of Illinois

In this simulation lesson, the user acts as a first-year resident and sees a pediatric patient in the emergency room. The supervisor asks questions about many of the resident's decisions to see if knowledge of the basic medical facts is sound. Decisions must be made about managing the patient in terms of history, lab, physical exam and treatment.

none;14 minutes;medical students

EMERGENCY MEDICINE: CARDIAC ARREST (arrest;1977;unpublished)
Winterhalter, Joseph D; Bonetti, William
U of I Medical School, Cntr. for Ed. Development

In this lesson simulation, a stocky white middle-aged female is wheeled into the emergency room on a gurney. One attendant compresses the patient's chest as the other holds an oxygen mask over her mouth. The student is called upon to make a series of decisions concerning the management of this patient.

microfiche;none;medical students

ENZYME: CLINICAL DIAGNOSIS BY LABORATORY METHODS (enzyme;1976;unpublished)
Hain, Timothy C; Ressler, Newton
Abraham Lincoln Medical School, Univ. of Illinois

This lesson uses a game format to teach the use of enzyme assays in the diagnostic process. Scoring is based on time needed to complete a case, number and aptness of assays ordered and number of correct answers. The game can be played at four levels, ranging from student to physician. A detailed help section is provided.

optional touch panel;30 minutes;medical students

INFECTIOUS INFILTRATIVE LUNG DISEASE, PART I (shp129;1975;unpublished)
Stutz, David R; Russell, Lawrence
Sheppard Air Force Base, Texas

This lesson covers the history and the physical exam for patients with pneumonia.

none;45-60 minutes;physicians' assistants

IT'S A JUNGLE OUT THERE (stress;1978;unpublished)
Sabbour, M. Saddeck; Nelson, Charles D; Kemp, Larry
U of I Medical School, Cntr. for Ed. Development
In this simulation, Lushwell Smirnoff, 41-year-old business executive, passes out after "passing some motions" during a heated board meeting at work. He is brought to the emergency room where it is a slow night, and the user has the opportunity to do a history, physical, lab workup and emergency treatment. Procedures are summarized at the end.
none;25 minutes;medical students

LAB. TECH. VIEW OF HEMOLYTIC DISEASE OF THE NEWBORN (bbcarle3;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson for medical technology students specializing in blood banking covers the causes, means of prediction, diagnosis and treatment of hemolytic disease of the newborn.
none;none;medical technology students, medical students

MALABSORPTION SYNDROME: SHIRLEY WISP PASSED OUT THIS MORNING (diarrhea;1976;unpublished)
DuPuis, William; Pratt, Raymond; Wong, Ruth; et al.
Abraham Lincoln Medical School, Univ. of Illinois
This lesson is a simulated patient interview, physical and treatment session. Through asking questions and ordering lab tests, etc., the patient's illness is to be diagnosed and treated. Each decision made by the student is scored, whether it be a question asked or a treatment decision. Finally, diagnosis is made and the scores are given.
none;30 minutes;medical students

MEDICAL GENETICS LABORATORY: METABOLIC DISEASES AND MEDICINE (genlab;1977;unpublished)
Li, I-Chian; Daniel, William; Brenner, Lisa; et al.
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents two patients, each with a metabolic disease. The student is provided with clinical, laboratory and family data and is requested to diagnose the specific disorder, provide a description of the molecular basis of the disease and provide recurrence risks. Branch pathways are provided to permit actual lab experience or test results.
microfiche;open-ended;first year medical students

MEDICAL PARASITOLOGY II: PATHOGENIC AMOEBAE (ameba2;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
In addition to general amoebae characteristics, the lesson covers the morphology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment of pathogenic amoebae belonging to the genera Dientamoeba, Entamoeba, and Naegleria in an interrogative linear format. A review quiz over commensal and/or pathogenic amoebae is available.
none;none;none

MEDICAL PARASITOLOGY IX: AMERICAN TRYPANOSOMIASIS (tryp2;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson teaches the general morphological characteristics of hemoflagellates, the life cycle, laboratory diagnoses, pathogenicity, symptomatollogy and treatment of Chagas' Disease. The lesson format is linear with textual presentation with inserted questions.
none;35 minutes;first year medical students

MEDICAL PARASITOLOGY I: COMMENSAL AMOEBAE (amebal; 1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
In addition to information on general amoebae characteristics, the lesson covers the morphology, life cycle, laboratory diagnosis, pathogenicity, symptomatology and treatment, where necessary, of amoebae often found in man and confused with pathogenic species. The commensal amoebae genera: Endolimarc, Entamoeba and Iodamoeba, are described.
none;10 minutes;first year medical students

MEDICAL PARASITOLOGY VIII: AFRICAN TRYPANOSOMIASIS (trypl; 1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson teaches, and where applicable, compares the general morphological characteristics, the life cycle, laboratory diagnosis, pathogenicity, symptomatology and treatment of Rhodesian and Gambian sleeping sickness. Sectional materials (e.g. treatment) are textual with inserted questions.
none;15 minutes;first year medical students

MEDICAL PARASITOLOGY VI: TISSUE AND LUMEN-DWELLING CILIATES (cilia;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
Incorporated into this lesson in a linear interrogative format is the information on general ciliate characteristics and on thermophology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment of the pathogen, Balantidium coli. A diagnostic quiz over the material is also available for those interested in reviewing.
none;5 minutes;first year medical students

MEDICAL PARASITOLOGY X: LEISHMANIASIS (leish; 1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents the hemoflagellate characteristics, and compares the life cycles, laboratory diagnoses, pathogenicity, symptomatology and treatments of cutaneous, mucocutaneous, and visceral leishmaniases. A linear format with inserted questions may be accessed for the diseases or only text may be accessed for category comparison.
none;15 minutes;first year medical students

MEDICAL PARASIT. VII: TISSUE AND LUMEN-DWELLING FLAGELLATES (flag;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciencec, Univ. of Illinois

Through a linear interrogative format, information on parasitic lumen-dwelling flagellates is presented. The morphology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment are discussed in relation to the various organisms. In addition, a diagnostic review quiz is accessible from the index.

none;35 minutes;first year medical students

MED. PARASITOLOGY V: PARASITIC SPOROZOANS (PART II) (sporz3;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

General sporozoan characteristics are briefly reviewed followed, in an interrogative linear format, by a presentation on the morphology, life cycle, laboratory diagnosis, pathogenicity, symptomology and treatment of Isospora species, Pneumocystis carinii and Sarcocystis lindemanni. A diagnostic review quiz over parasitic sporozoans is accessible.

none;5 minutes;first year medical students

MED. PARASIT. XI: MALARIAL PARASITES & DISEASE (malaria;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson presents information comparing the four major species causing human malaria: Plasmodium falciparum, P. ovale, P. vivax, and P. malariae. The life cycles, laboratory diagnoses, symptomatology, pathogenicity and treatment of the various organisms is presented in a linear format with inserted questions.

none;35 minutes;first year medical students

MICROBIAL TOXINS III: CLINICAL CASES (microtox3;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois

Three clinical toxemias are presented for diagnosis by the student. Such aspects as symptoms, pathogenesis, and treatment are emphasized.

slide selector, microfiche;15 minutes;first year medical students

MICROLOGUE II: GRAM POSITIVE COCCI, PART II (microlog2b;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson continues the discussion of the gram positive cocci begun in Part I. The patient dialogue is continued with specific consideration of staphylococcus, streptococcus and streptococcus pneumoniae. Characteristics and morphology of these organisms are studied as well as criteria for identification.

microfiche;20 minutes;first year medical students

MICROQUIZ II: GASTROINTESTINAL INFECTIONS (gastroquiz;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson is in a quiz-game format and reviews topics of habitat, transmission, morphology, growth, diagnostic techniques, immunology, pathogenicity, and chemotherapy of gastrointestinal infectious agents such as protozoa, helminths, salmonella, shigella, coliform, bacilli, and enteric bacilli.

none;20 minutes;first year medical students

MICROQUIZ I: RESPIRATORY INFECTIONS (uriquiz;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson is in a quiz-game format and reviews topics of habitat, transmission, morphology, growth, diagnostic techniques, immunology, pathogenicity, and chemotherapy of respiratoy disease agents such as RNA viruses, fungi, mycobacteria, diphtheria, haemophilus, mycoplasma, cocci, and chlamydia.

none;20 minutes;first year medical students

MULTIPLE CONGENITAL DEFORMITIES: MANAGEMENT AND PROGNOSIS (lumpy;1977;unpublished)
Trotter, David; Barmada, Riad; Nelson, Charles D
Abraham Lincoln School of Medicine, Univ. of Illinois

This lesson is a simulated case study of an infant girl with multiple congenital deformities. The student is guided through a series of tests and treatments to diagnose her problem and correct the defects. Questions are asked about procedures at various points in the lesson.

microfiche;none;medical students

NON-INFECTIOUS INFILTRATIVE LUNG DISEASE (shp103;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas

This lesson discusses non-infectious infiltrative lung diseases: the subjective and objective findings and the treatment principles.

none;45-60 minutes;physicians' assistants

A PAIN IN THE NECK: HARRY JONES COMPLAINS OF THE FLU (lump;1978;unpublished)
Busse, Joel; Graham, Carol; Nelson, Charles D; et al.
University of Illinois Rockford School of Medicine

In this simulation, Harry Jones complains of flu symptoms and a stiff neck. He is a regular patient usually in good health. The student is required to take a complete medical history, gather lab and physical data, and take x-rays. Faulty procedures in the initial workup cause the patient to leave the office for 3 month delay, causing a worsening condition.

optional microfiche;none;medical students

PAINFUL KNEE IN A CHILD: MANAGEMENT AND PROGNOSIS (knee;1977;unpublished)
Trotter, David; Ray, Robert D; Nelson, Charles D
Abraham Lincoln School of Medicine, Univ. of Illinois

In this simulated case study, an eight-year-old male is presented with a painful knee resulting from a street fight. The student must diagnose and treat the problem from historical and physical information gathered, and from the interpretation of x-rays.

microfiche;none;medical students

PHYSICIAN SELF-ASSESSMENT I (psa01;1976;unpublished)
Lackmann, John; Bloomfield, Louis; Kaufman, S.
Abraham Lincoln Medical School, Univ. of Illinois

In this lesson, the patient presents the student with a problem of occipital headaches. The student must make a series of decisions on how to diagnose and treat the problem. Each decision is scored and real data is presented, including clinical pictures through the use of microfiche.

microfiche, optional touch panel;none;medical students

PHYSICIAN SELF-ASSESSMENT II (psa02;1976;unpublished)
Bloomfield, Daniel; Bloomfield, Louis; Lackmann, John
Abraham Lincoln Medical School, Univ. of Illinois

This lesson simulates a doctor's office and the student is presented with the case of Jean Sims, whose mother insists her daughter is ill. Complicating the case is the nurse's intrusion into the treatment with another patient complaining of chest pains. The student must make a series of decisions in diagnosis and treatment.

microfiche, optional touch panel;none;medical students

PHYSICIAN SELF-ASSESSMENT III (psa03;1974;unpublished)
Lackmann, John; Bloomfield, Louis; Dubrow, Ira
Abraham Lincoln Medical School, University of Illinois

In this simulated emergency, the user, as doctor, is awakened in the middle of the night by a phone call from a frantic mother. Her baby has an earache and is tugging at his ears. The doctor must decide whether to meet her at the emergency room right away, send her out for a prescription, or have her call back in the morning.

optional touch panel;open-ended;medical students

PHYSICIAN SELF-ASSESSMENT V (psa05;1974;unpublished)
Esterly, N.; Solomon, Lawrence; Chen, Thomas; et al.
Abraham Lincoln School of Medicine, Univ. of Illinois

In this simulation, a 28-year-old woman comes to the doctor complaining of a rash on her hands. The student must diagnose her problem and treat her condition.

microfiche, optional touch panel;none;medical students

PHYSICIAN SELF-ASSESSMENT VI (psa06;1976;unpublished)

Lackmann, John; Chen, Thomas; Yamada, Mitsuru; et al.
Abraham Lincoln School of Medicine, Univ. of Illinois

This lesson simulates an emergency room call for a man suffering from welts. Initial contact is by phone, as the doctor (the user) is awakened in the night. The doctor sees the patient, takes history, physical, does lab tests, admits man to the hospital and prescribes proper treatment. Procedures are summarized at the end and the student is graded.

microfiche, optional touch panel;open-ended;medical students

PHYSICIAN SELF-ASSESSMENT VIII (psa08;1976;unpublished)

Loeffel, Dorinda; Solomon, Lawrence; Yamada, Mitsuru; et al.
Abraham Lincoln Medical School, Univ. of Illinois

In this doctor's office simulation, a young man comes into the office with severe acne. Several alternative paths are possible, some of which lead to a cure, others to a malpractice suit. Costs are kept and a summary and bibliography follow.

microfiche, optional touch panel;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: BACKACHE (feinz7;1977;unpublished)

Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois

In this simulation the patient is a 31-year-old moderately obese man who comes in after the sudden onset of backache two days ago. The user is a student physician working for an ambulatory care facility who has been assigned to this man. Choices are made from options provided and each selection is discussed.

none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: COUGH (feinz3;1977;unpublished)

Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois

In this simulation the patient is a 47-year-old man with a progressively worsening cough and shortness of breath. The user is a student physician working for an ambulatory care facility who has been assigned to this man. Choices are made from options provided and each selection is discussed.

none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: EAR INFECTION (feinz2;1977;unpublished)

Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois

In this simulation the patient is a three-year-old boy who has had a painful left ear and diarrhea. His temperature is normal. The user is a student physician working for an ambulatory care facility who has been assigned to this family. Choices are made from options provided and each selection is discussed.

none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: INDIGESTION (feinz4;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 52-year-old man with a history of established hypertension and the recent onset of indigestion, variably related to meals. The user is a student physician for an ambulatory care facility who has been assigned to this man. Choices are made from options provided and each selection is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: RETURN VISIT (feinz9;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the 43-year-old male patient has been asked to return to the clinic following a routine physical and laboratory tests that yielded a problem list. The user is a student physician working in an ambulatory care facility who has handled this case. Choices are made from options provided and each selection is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: SORE THROAT (feinz1;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is an eight-year-old girl who has had a fever to 104°, sore throat and cough for three days. The user is a student physician working in an ambulatory care facility who has been assigned to this family. Choices are made from options provided and each selection is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: STOMACH TROUBLE (feinz5;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 25-year-old woman with occasional nausea and vomitting. The user is a student physician working for an ambulatory care facility who has been assigned to this woman. Choices are made from options provided and each selction is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: WEAKNESS (feinz6;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 70-year-old woman who in the last three weeks has gained weight and felt generalized weakness. The user is a student physician working for an ambulatory care facility who has been assigned to this woman. Choices are made from options provided and each selection is discussed.
none;none;medical students

PULMONARY EMBOLISM (shp44;1975;unpublished)
Russell, Lawrence
Sheppard Air Force Base, Texas

This lesson defines the terms associated with pulmonary embolism, describes the difference between pulmonary circulation and systemic circulation, lists the sequence of events which can follow pulmonary embolism, and discusses the treatment and prevention of the disease.

none;2 hours;physicians' assistants

SIMULATED PATIENT ENCOUNTER (shp79;1973;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas

This lesson provides a clinical simulation in which the student takes a medical history, performs a physical exam, requests laboratory tests to be run, makes a diagnosis and consults with the patient.

none;1-2 hours;physicians' assistants

SWOLLEN, PALPABLE MASS IN A SEVEN-YEAR-OLD BOY (fibula;1978;unpublished)
Trotter, David; Barmada, Riad; Ray, Robert D; et al.
Abraham Lincoln School of Medicine, Univ. of Illinois

In this case study a seven-year-old male suffers from malaise, fever and intermittent pain in the right proximal leg. The boy has been complaining of pain for about two months, but the parents dismissed it as "growing pains". The student must work up the case with history, physical, lab studies, diagnosis and treatment.

microfiche;15 minutes;medical students

TENDER, PAINFUL EXTREMITIES (femur;1977;unpublished)
Trotter, David; Ray, Robert D; Barmada, Riad
Abraham Lincoln School of Medicine, Univ. of Illinois

This case study presents a four-year-old male with a 72-hour history of irritability, fever and dyspnea. The student must offer tentative diagnosis, gather historical, physical and lab data, diagnose and treat the problem.

microfiche;none;medical students

TRANSFUSION THERAPY III: THROMBOCYTOPENIA, EVAL. AND TREAT. (thrombo;1978;unpublished)
Burton, Timothy; Siegel, Eliot; Dawson, R. Ben
School of Medicine, Univ. of Maryland, Baltimore

This two-part lesson is third in a series of transfusion therapy lessons, and describes the clinical presentation and laboratory evaluation of thrombocytopenia. The second half of the program discusses immunological causes, with emphasis on diagnosis and treatment. Quizzes follow major topics in the lesson.

none;40 minutes;medical students

TRANSFUSION THERAPY II:PLATELETS AND PLASMA COMP. (bend2;1978;unpublished)
Dawson, R. Ben; Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore
This lesson is second in the series of transfusion therapy lessons. It deals with platelets and plasma clotting factors.
none;20-30 minutes;medical students

TRANSFUSION THERAPY I: INTRO., RBC TRANSFUSIONS, & REACTIONS (bend;1978;unpublished)
Dawson, R. Ben; Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore
This lesson is the first in a series to acquaint the student with the basics of blood transfusion therapy. It presents the material through an interactional format, where the student is asked to manage a clinical case, and is questioned along the way.
none;none;medical students

TUMORS OF THE RESPIRATORY SYSTEM (1tumor;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of tumors of the respiratory system. Diagnostic criteria and possible hormonal syndromes are also considered. A highly indexed outline format is utilized with questions presented to help assess the student's understanding of the material.
optional touch panel;none;first year medical students

UPPER AIRWAY DISEASE (shp96;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson defines upper airway disease, identifies disease processes that are associated with specific anatomical areas of the upper respiratory tract and describes the etiology of upper airway disease, the diagnostic features of the disease processes and the treatment.
This lesson requires 35mm slides.;2 hours;physicians' assistants

YELLOW DIRT DOWN IN MY SOUL (yellowdirt;1977;unpublished)
Alora, Angeles; Kemp, Larry; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development
In this simulation, Peter Seaman is a merchant sailor just back from Southeast Asia. He has headache, nausea, and fever, and has noticed that his skin is attaining a pronounced yellow palor. The student is required to gather history, lab and physical data, make a diagnosis and treat the patient.
none;none;medical students

Dictation (Educational method)

DICTATION LESSONS, HIGH-LEVEL (hdictatel;1978;unpublished)
Pech, William; Banks, Fred
Div. of English as a Second Language, Univ. of Ill.

The dictation lessons for students of English as a Second Language are designed to reinforce the vocabulary, grammatical structures, and spelling words which the students learn in other ESL-PLATO lessons. The high-level dictation lessons include "hdictatel" - "hdictatel4". In each, the student may listen repeatedly to the complete sentences.

audio device, touch panel;variable;foreign students improving English

DICTATION LESSONS, LOW-LEVEL (dictatel;1978;unpublished)
Pech, William; Banks, Fred
Div. of English as a Second Language, Univ. of Ill.

The dictation lessons for students of English as a Second Language are designed to reinforce the vocabulary, grammatical structures, and spelling words which the students learn in other ESL-PLATO lessons. The low-level dictation lessons include "dictatel" - "dictatel4". In each, the student may listen repeatedly to the complete sentences.

audio device, touch panel;variable;foreign students improving English

Dictionaries

see English language--Dictionaries

Diet

NUTRITION SERIES, GENERAL OVERVIEW (nutrl;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I

This is an introductory lesson in the a series of Nutrition lessons designed to provide some basic concepts in nutritional science. Digestive organs and functions, carbohydrates, lipids, proteins and energy will be discussed.

none;25-30 minutes;nutrition students

Differential equations, Linear

GENERAL LINEAR SYSTEMS SIMULATOR (linsys;1976;1979)
Beck, Howard W; Kuo, Benjamin C
Dept. Elec. Engineering, U of I, Urbana, Ill.

This lesson will compute the time solution of a set of linear differential equations. The user must specify the matrices, appropriate dimensions, initial condition and initial and final times over which the simulation is to be run.

none;open-ended;college/university students

Diffusion

DIFFUSION AND OSMOSIS (osmosis;1976;1977)
Boggs, Stephen H
CERL, University of Illinois
The lesson is an introduction to the ideas of diffusion and osmosis. After the subject of diffusion is treated, there are sections on molecular motion, membranes (with a demonstration of osmosis), and a U-tube and blood cell experiment.
none;35 minutes;college/university students

DIFFUSION OF GASES (shp68;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas
This lesson discusses the diffusion of gases by dissolution in a liquid, specifically the dissolution of respiratory gases in the blood and subsequent diffusion in the lungs.
none;2 hours;physicians' assistants

SOLUTIONS -- CONCENTRATION (conc;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson deals with the use of units of concentration (dimensional analysis) in quantitative chemical work where most chemical reactions take place in solutions. Problems of increasing difficulty are presented particularly the kinds of problem common in chemistry laboratories.
none;46 minutes;college/university students

Digestion

DIGESTIVE ORGANS AND THEIR FUNCTIONS (nutr2;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This second lesson in the Nutrition Series presents material about the chemical processes contributing to the breakdown and utilization of food.
none;25-30 minutes;nutrition students

SANGER OLIGONUCLEOTIDE MAPPING (saml;1976;1978)
Kaplan, Samuel
Department of Microbiology, University of Illinois
The lesson teaches the student the techniques of Sanger oligonucleotide mapping through a simulated laboratory exercise. The lesson is not intended to substitute for a wet laboratory experience. The exercise is self-paced."saml" takes up digestion of RNA chains, "sam2" lforesis oligos, "sam3" questions on digestion, "sam4" chain generation.
none;2 1/2-3 hours total;college/university students

Digestive organs

DIGESTIVE ORGANS AND THEIR FUNCTIONS (nutr2;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This second lesson in the Nutrition Series presents material about the chemical processes contributing to the breakdown and utilization of food.
none;25-30 minutes;nutrition students

THE HUMAN DIGESTIVE SYSTEM (digestion;1975;1977)
Boggs, Stephen H
University of Illinois, Urbana, Illinois
The lesson teaches the major organs and structures of the human digestive system, the locations of each and the function each performs.
none;50 minutes;college/university students in biology or physiology

Dilemma

DILEMMA COUNSELING SYSTEM (dilemma;1974;1978)
Wagman, Morton; Kerber, Kenneth W
Counseling Center, University of Illinois
The system described in the lesson teaches a method for solving life-choice problems, and provides counseling for a current psychological dilemma. The lesson gives practice in phrasing dilemma problems, generates solutions to these dilemmas and then allow the method to be applied to a personal problem of the student.
none;open-ended;high school age and older

Dilution

SOLUTIONS -- CONCENTRATION (conc;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson deals with the use of units of concentration (dimensional analysis) in quantitative chemical work where most chemical reactions take place in solutions. Problems of increasing difficulty are presented particularly the kinds of problem common in chemistry laboratories.
none;46 minutes;college/university students

Dimensional analysis

CONVERSION FACTORS AND DIMENSIONAL ANALYSIS (dimanal;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson instructs in the techniques of problem-solving by dimensional analysis and the use of conversion factors. Dimensional analysis allows the solution of problems by merely looking at the units involved, setting up conversion factors and converting quantities from one set of units to another.
touch panel;35 minutes;college/university students

Discussion

DISCUSSION LEADING TECHNIQUES (discuss;1978;unpublished)
Browdy, Marshall; Coleman, Ronald
U of I Medical School, Cntr. for Ed. Development

This lesson presents various techniques a discussion leader might use, regardless of subject matter, to guide and facilitate a small group discussion. It is stressed that the methods used by a group leader to encourage spontaneous interactions are important.

microfiche;20-25 minutes;medical students, general audience

Diseases--Reporting

MORBIDITY SURVEY (morbsur;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson provides the student access to a morbidity survey of 19 infectious diseases reported by the Communicable Disease Center. The reported cases for various years may be compared, via PLATO's graphing capabilities, on a cumulative or non-cumulative basis.

touch panel;open-ended;first year medical students

Distillation

SIMPLE, FRACTIONAL AND STEAM DISTILLATIONS (idistill;1976;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.

The lesson provides a brief introduction to the three types of purification processes: simple, fractional and steam distillation.

none;30 minutes;college and university students of organic chemistry

Distillation, Fractional

FRACTIONAL DISTILLATION EXPERIMENT (distill;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This lesson is a simulation of the fractional distillation of pentane and hexane. The student controls the pot temperature and collects fractions. He must separate the mixture. After doing the assigned problem, the student can make up his own distillation problem, specifying the boiling points of the components and the number of column plates.

touch panel;15 minutes;college/university students

FRAKIONIERTES DESTILLATIONSEXPERIMENT (gdistill;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This lesson is written in German. The program provides a simulation of a fractional distillation of a 50:50 mixture of pentane and hexane in which the student assembles the apparatus and runs the distillation by controlling the temperature of the heating bath. The object of the experiment is to obtain 40 ml. of each compound with 95% purity.

touch panel;15 minutes;college/university students

SIMPLE, FRACTIONAL AND STEAM DISTILLATIONS (idistill;1976;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.
The lesson provides a brief introduction to the three types of purification processes: simple, fractional and steam distillation.
none;30 minutes;college and university students of organic chemistry

Distribution (Probability theory)

SAMPLING DISTRIBUTIONS (elstat3;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson discusses sampling distribution, a theoretical probability distribution which expresses the relationship between each possible sample result and the population values.
none;none;college/university students

Distributive law (Mathematics)

THE DISTRIBUTIVE LAW (dist;1976;1978)
Weaver, Tamar A; Baillie, Robert
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a graphic model for the distributive law and practice on the distributive law with signed numbers and variables.
none;30 minutes;elementary algebra students

Diuretics and diuresis

DRUGS: DIURETICS QUIZ I (kumc52;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson contains the first of two quizzes on diuretic drugs.
none;15 minutes;first year medical students

DRUGS: DIURETICS QUIZ II (kumc57;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson contains the second of two quizzes on diuretic drugs.
none;30 minutes;first year medical students

Division--Arithmetic

CHAPTER CHECKUPS (zmodcheck;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson offers checkup problems for multiplication meanings, techniques and subtraction ("countdown" and "facts" methods), and the multiplication algorithm as well as division concepts.
none;open-ended;intermediate level elementary students

DIVIDE AND CONQUER (zdivtech;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides more practice in using the techniques of division to solve problems selected by PLATO.
none;One short segment and unlimited repeats;elementary students

DIVISION MEANS...... (zdivmeans;1976;unpublished)
Felty, Michael
U of I NSF Whole Number Elem. Math. Group
The lesson introduces the different meanings of division and bridges the gap between their representation in pictures, words and symbols.
none;2-5 short segments plus practice;elementary students

DIVISION USING SPECIAL NUMBERS (zdivlist; 1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Campanini, Sue
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides understanding of the division algorithm as a way of working division problems so that one only needs to multiply the divisor by one-digit numbers. The objective is to make the student able to use a table of one-digit multiples of the divisor to work division problems efficiently.
none;one 10 minute segment, unlimited repeats;elementary students

GIMME (DIVISION AS SHARING) (zgimme;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I NSF Whole Number Elem. Math. Group
The lesson introduces a modified division algorithm (not based on place value) in the context of a physical model of sharing objects. The student is taught that the concept of division is "sharing equally among groups".
none;two 10 minute segments, unlimited repeats;elementary students

GUESSING DIVISION (ztrynum;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Campanini, Sue
U of I NSF Whole Numner Elem. Math. Group
The lesson teaches the student the technique of working division problems by finding the largest multiple of the divisor that fits into the dividend. The student is to guess quotients and multiplies to see if they fit.
none;two 10 minute segments, unlimited repeats;elementary students

HOME SWEET TOADSTOOL (ztoad; 1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Wilson, James H
U of I NSF Whole Number Elem. Math. Group
The lesson introduces repeated subtraction on the numberline in the context of a physical model to solve a division problem.
none;5 ten minute segments, unlimited repeats;elementary students

INTRODUCTION TO LONG DIVISION, PART I (zdiv1;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I NSF Whole Numbers Elem. Math. Group
The lesson introduces the long division algorithm in terms of the model of sharing objects equally. The student is taught to use the standard long division algorithm when it is treated in terms of sharing concrete objects in different size containers.
none;three segments with repeats possible;elementary students

INTRODUCTION TO LONG DIVISION, PART II (zdiv2;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I NSF Whole Numbers Elem. Math. Group
The lesson teaches the students the connection between the standard long division algorithm and the model of it discussed in the previous lesson. It also teaches the students how to work problems using the standard algorithm.
none;three segments with repeats possible;elementary students

MIXED DRILL + - × ÷ (wmg08;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides practice with addition, subtraction, multiplication and division.
none;none;elementary school children

NUMBERLINE DIVISION (zdline;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Wilson, James H
U of I NSF Whole Number Elem. Math. Group
The lesson extends the "toad" model to using the numberline to solve division problems.
none;open-ended;upper level elementary students

REPEATED SUBTRACTION (zworms;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Whole Number Elem. Math. Group
The lesson attempts to introduce a modified division algorithm (not based on place value) in the context of a physical model of grouping objects.
none;two 10 minute segments, unlimited repeats;elementary students

SLIDE RULE (srl;1976;1978)
Lederman, Barbara; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and practice in the use of a slide rule for multiplication and division problems.
slide rule;3.5 hours;students of technical math or physical science

STEP-BY-STEP DIVISION (zdivalg;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson
U of I NSF Whole Number Elem. Math. Group
The lesson provides practice doing division using the division algorithm.
none;unlimited repeats;upper level elementary students

WAYS TO DIVIDE--PRACTICE (zdivways;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Felty, Michael
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides the student practice with the techniques of division. It emphasizes that there are many different ways to solve a division problem. The student is allowed to choose the technique(s) he wishes to use for the solution of the problems.
none;one 10 minute segment, unlimited repeats;elementary students

Dormancy in plants

INTRODUCTION TO SEED GERMINATION (morphogen;1973;1980)
Wolniak, Steven; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the processes of seed germination and dormancy and defines the optimum conditions for seed germination.
none;30-40 minutes;college/university students

Drug abuse--Treatment

NOXIOUS DRUGS (shp33;1974;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson discusses drug classes and individual drugs exhibiting toxic manifestations in the respiratory system.
none;60 minutes;physicians' assistants

Drug metabolism

A LABORATORY EXPERIENCE IN PHARMACOLOGY: DOSAGE SCHEDULING (dose;1977;unpublished)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Science, Univ. of Illinois
This program provides the student with an opportunity to compare absorption rate, volumes of distribution and elimination rates and their effect on plasma levels of several known and theoretical drugs.
none;none;first year medical students

PHARMACODYNAMICS II: DRUG ACTION, METABOLISM AND EXCRETION
(pcol2;1975;unpubl.)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois

The basic principles of pharmacology are presented and examples emphasizing the clinical relevance of the material are drawn from pertinent literature. Selected case studies are also presented to coordinate basic pharmacological

none;20 minutes;first year medical students

PHARMACOKINETICS I: ABSORPT., DISTRIB., METABOL., EXCRET.
(kumc6;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Shoeman, D; et al.
University of Kansas / University of Illinois

This lesson presents material to aid in the design of a dose regimen, which requires the development of an equilibrium among absorption, distribution, metabolism and excretion so as to maximize the desired therapeutic effects and minimize toxic reactions.

none;2 hours;first year medical students

Drugs--Dosage

AFFECTIVE ILLNESS AND THEIR CAUSES AND TREATMENT (nursing19;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.

This lesson discusses various aspects of affective illnesses and their causes and treatment. The method used in this lesson is the presentation of material followed by one or more questions.

none:none;nursing students

A LABORATORY EXPERIENCE IN PHARMACOLOGY: DOSAGE SCHEDULING
(dose;1977;unpublished)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Science, Univ. of Illinois

This program provides the student with an opportunity to compare absorption rate, volumes of distribution and elimination rates and their effect on plasma levels of several known and theoretical drugs.

none;none;first year medical students

MEDICATIONS FOR USE IN OBSTETRICS (delivery;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.

The lesson covers the dosages, action, nursing responsibilities and side effects of various medications used in the nursing of mothers. Seven patient situations which require drug intervention are given the student, and the use of the appropriate drug therapy for each situation may be investigated.

none;50-60 minutes;nursing students

PHARMACOKINETICS I: ABSORPT., DISTRIB., METABOL., EXCRET.
(kumc6;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Shoeman, D; et al.
University of Kansas / University of Illinois
This lesson presents material to aid in the design of a dose regimen, which requires the development of an equilibrium among absorption, distribution, metabolism and excretion so as to maximize the desired therapeutic effects and minimize toxic reactions.
none;2 hours;first year medical students

Drugs--Dosage--Problems, exercises, etc.
PHARMACOKINETICS II: DOSAGE PROBLEMS (kumc8;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson contains exercises designed to give the user the feel of developing dose schedules, based on the material presented in the PLATO lesson "Pharmacokinetics I".
none;20 minutes;first year medical students

Drugs--Toxicology
NOXIOUS DRUGS (shp33;1974;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson discusses drug classes and individual drugs exhibiting toxic manifestations in the respiratory system.
none;60 minutes;physicians' assistants

Ductus arteriosus
CONGENITAL DEFECTS OF THE HEART AND GREAT VESSELS (pedcard;1977;unpublished)
Green, Michael; Sliwa, W. Gerard
School of Basic Medical Science, Univ. of Illinois
This lesson presents basic physiology and key clinical signs of major congenital defects of the heart and great vessels.
none;none;first year medical students

Dynamics
Non-rotational
FORCES AND FREE-BODY DIAGRAMS (cb10;1975;1977)
Bennett, Carol D
Physics Department, Univ. of Illinois, Urbana, Ill.
The lesson introduces typical forces, including tension in a string and friction between surfaces. It treats the concept of a free body and has the student isolate and analyze various kinds of subsystems for the forces.
none;70 minutes;college/university students

PROBLEM-SOLVING LESSON USING NEWTON'S LAWS OF MOTION (free1;1971,1972;1977)
Sherwood, Bruce Arne; Burson, Craig
Physics Department, University of Illinois
This lesson is a problem-solving lesson using Newton's laws of motion. The student is given a careful set of systematic procedures for solving problems of this kind, and then is given several exercises on simple one- and two-body systems. There is a "mastery quiz" at the end of the lesson.
none;80 minutes;college/university students of introductory physics

RING GAME (ring;1974;unpublished)
Bennett, Carol D
Physics Department, University of Illinois
The game consists of attempting to stop the motion of a ring which is moving. Two forces causing the motion are given, and the player must figure out a third force and where it should be applied to arrest the motion of the ring.
none;15 minutes;college/university

Rotational

GYROSCOPE EXPERIMENT - SIMULATION (gyrolab;1973;unpublished)
Bennett, Carol D
Physics Department, University of Illinois
The object of the lesson is to measure the precession of a gyroscope when a torque is applied to one end. The result is compared with theory. This lesson is intended as an introduction to the actual experiment.
none;none;students of classical mechanics, elementary physics

KINETIC ENERGY OF ROTATION AND MOMENT OF INERTIA (re14;1976;1978)
Kane, Dennis
Physics Department, University of Illinois
The lesson gives the student drill in calculating I and KE for various rotating systems. The introduction contains a review of the principles involved in the calculations.
none;20 minutes;college/university students

PROBLEM-SOLVING LESSON IN CLASSICAL ROT. DYNAMICS (free2;1972,1973;1977)
Sherwood, Bruce Arne; Burson, Craig
Physics Department, University of Illinois
The complication of rotational motion is added to the problems involving dynamics systems in this problem-solving exercise. The student is given the option of examining all the problems to be solved before solving any of them. The lesson includes a mastery quiz.
none;70 minutes;college/university students of introductory physics

RADIAN MEASURE (inertia;1974;unpublished)
Bennett, Carol D; Smith, James H
Physics Department, University of Illinois, Urbana

This elementary classical mechanics lesson discusses radians and degrees, with the intent that the user master the concepts of radian angle measure and $\sin(\theta) \rightarrow \theta$ as $\theta \rightarrow 0$.

none;none;physics students

ROTATIONAL DYNAMICS (rotdyn;1977;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois

The lesson gives an overview of the major concepts needed to analyze the motion of objects that rotate. The lesson uses a small amount of calculus.

none;80 minutes;college/university students in introductory physics

TORQUE AND ANGULAR MOMENTUM (torque;1974;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois

The lesson presents the concepts of torque and angular momentum and includes drills on direction and magnitude of torques applied by a wrench (treatment is mainly two-dimensional). Angular momentum is calculated fro a spinning and translating dumbbell. There is also an example of angular momentum conservation.

none;60 minutes;college/university students in introductory physics

TORQUE GAME (torgame;1976;1978)
Bennett, Carol D
Physics Department, University of Illinois

The program consists of three "Olympic" torque games involving balancing masses on a pivoted rod. The exercises in each game are timed with time penalties for errors. The use of a touch panel is optional for playing the games.

touch panel (optional);none;students of classical mechanics

Dyspepsia

PROBLEM SOLVING IN CLINICAL MEDICINE: INDIGESTION (feinz4;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois

In this simulation the patient is a 52-year-old man with a history of established hypertension and the recent onset of indigestion, variably related to meals. The user is a student physician for an ambulatory care facility who has been assigned to this man. Choices are made from options provided and each selection is discussed.

none;none;medical students

Ear training

INTONATION TRAINING (muspercept;1977;unpublished)
Segre, Alberto; Sorrentino, Tony
School of Music, U of I, Urbana, Illinois

This lesson is intended as an aid in improving listening abilities. The specific goals are to improve one's discrimination of "sharpness" and "flatness" and to increase one's ability to hear smaller pitch deviations; specifically, from a maximum deviation of 15 cents to a deviation of 5 cents or less.

music box;none;student conductors and musicians

SOLFA ... MELODIC DICTION (musik1;1976;unpublished)
Williams, Mark A
School of Music, U of I, Urbana, Illinois

This lesson is designed to supplement solfa studies in eartraining and melodic diction.

music box;open-ended;music students

Ear--Diseases

PROBLEM SOLVING IN CLINICAL MEDICINE: EAR INFECTION (feinz2;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois

In this simulation the patient is a three-year-old boy who has had a painful left ear and diarrhea. His temperature is normal. The user is a student physician working for an ambulatory care facility who has been assigned to this family. Choices are made from options provided and each selection is discussed.

none;none;medical students

Economic forecasting

ECONOMIC DEVELOPMENT (econdev1;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using economic variables can be graphed. A list of available regions is provided and variables can be changed for each projection.

none;open-ended;persons interested in populations

ECONOMIC DEVELOPMENT TWO SEX VERSION (riley;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using variables of two sex (male and female) economic development can be graphed. A list of available regions is provided and the variables can be changed for each projection.

none;open-ended;persons studying populations

Economic policy

INFLATION (inflation;1978;unpublished)
Paden, Donald W; Barr, Michael
Economics Department, University of Illinois
In this lesson several causes of inflation are examined, the reason for unemployment is reviewed and the relationship between unemployment and inflation is discussed.
none;none;college/university students of economics

Economics

International trade

REVIEW QUESTIONS FOR INTRO. TO ECON. ANALYSIS, COURSE END (eco103;1976;1978)
Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois
This program contains a series of ten multiple choice questions to be used as a review for the end of the course on "An Introduction to Economic Analysis". The questions are questions on the international trade material in the course. They are reproduced from the book by Donald W. Paden, "Introduction to Economic Analysis", West Publishing Co., 1975.
none;10 minutes;college/university

Macroeconomics

FISCAL POLICY (macro3;1976;1978)
Paden, Donald W; Wilson, James H; Barr, Michael
Department of Economics, University of Illinois
The lesson examines five alternative fiscal policies from one of doing nothing to several which fully compensate for an assumed decline in aggregate demand. The policies are examined by means of a model which initially assumes an economy with full employment.
none;40 minutes;college/university students

MACROECONOMICS II: TAXES AND GOVERNMENT (macro2;1976;1979)
Paden, Donald W; Wilson, James H; Barr, Michael
Department of Economics, University of Illinois
The purpose of this lesson is to help reinforce the ideas of the first lesson on macroeconomics. Taxes and government are added to the original model to provide a more realistic view of the operation of the economy.
none;none;college/university

MACROECONOMICS:INCOME DETERMINATION - NO GOVERNMENT (macro1;1976;1979)
Paden, Donald W; Wilson, James H; Barr, Michael
Department of Economics, University of Illinois
This lesson reviews macroeconomics. It should help the user understand how the various parts of our macroeconomic system fit together and how decisions with respect to consumption and investment influence the operation of the economy and affect our economic welfare.
none;none;college/university

REVIEW QUESTIONS FOR INTRO. TO ECON. ANALYSIS, 3RD HR. EXAM (eco102; 1976;1978)

Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois

This program contains a series of ten multiple choice questions to be used as a review for the third hour examination in a course, "Introduction to Economic Analysis". The questions are on the macroeconomic material in the course. They are reproduced from the book by Donald W. Paden, "Introduction to Economic Analysis", West Publishing Co., 1975.

none;10 minutes;college/university

Microeconomics

MICRO ECONOMICS II: IMPERFECT COMPETITION (consume4;1976;1977)

Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois

The lesson presents the subject of less than perfect competition (imperfect competition) among firms conducting business in markets where there are numerous producers selling a differentiated product. The lesson stresses the simularities between monopoly, oligopoly, and monopolistic competition.

none;40 minutes;college/university

MICRO ECONOMICS I: SUPPLY AND DEMAND (consume3;1976;1977)

Paden, Donald W; Barr, Michael; Wilson, James H
Department of Economics, University of Illinois

The lesson reviews the concepts of demand and supply and (demand) elasticity by a series of questions on the concepts which are graphically illustrated in a simple manner. The student's answers are scored giving him a means of assessing the extent of his knowledge and understanding of the concepts of demand, supply and elasticity.

none;35 minutes;college/university

PERFECT COMPETITION (microiii;1976;1977)

Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois

The lesson reviews the competition concepts learned in the lesson on "Imperfect Competition" showing how producers in our society are faced as an industry with a market demand curve which is the sum of all demand curves of individual consumers. The lesson then presents the concept of perfect competition in which firms sell standardized products.

none;40 minutes;college/university

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REVIEW QUESTIONS FOR INTRO. TO ECON. ANALYSIS, 2ND HR. EXAM
(eco101;1976;1978)
Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois

This program contains a series of ten multiple choice questions to be used as a review for the second hour examination in a course, "Introduction to Economic Analysis". The questions are on the microeconomic material in the course. The questions are reproduced from "An Introduction to Economic Analysis" by Donald W. Paden, West Publishing Co.,1975.

none;10 minutes;college/university

Economics--Examinations, questions, etc.

ON-LINE-TEST SAMPLE TEST (smsdemo;1979;unpublished)
Barr, Michael
Department of Economics, University of Illinois

This lesson demonstrates the on-line economics tests. There are three sections for the user to see: Beginning a Test, See Missed Questions, and Staff Options. There are three actual tests, but until set up, they all jump out to this demonstration lesson.

none;open-ended;teachers of economics

REVIEW QUESTIONS FOR INTRO. TO ECON. ANALYSIS, COURSE END
(eco103;1976;1978)
Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois

This program contains a series of ten multiple choice questions to be used as a review for the end of the course on "An Introduction to Economic Analysis". The questions are questions on the international trade material in the course. They are reproduced from the book by Donald W. Paden, "Introduction to Economic Analysis", West Publishing Co., 1975.

none;10 minutes;college/university

REVIEW QUESTIONS FOR INTRO. TO ECON. ANALYSIS, 1ST HR. EXAM
(eco100;1976;1978)
Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois

This program contains a series of ten multiple choice questions to be used as a review for the first hour examination in a course, "Introduction to Economic Analysis". The questions are on the introductory material in the course. They are reproduced from the book by Donald W. Paden, "Introduction to Economic Analysis", West Publishing Co., 1975.

none;10 minutes;college/university

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REVIEW QUESTIONS FOR INTRO. TO ECON. ANALYSIS, 2ND HR. EXAM
(eco101;1976;1978)
Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois

This program contains a series of ten multiple choice questions to be used as a review for the second hour examination in a course, "Introduction to Economic Analysis". The questions are on the microeconomic material in the course. The questions are reproduced from "An Introduction to Economic Analysis" by Donald W. Paden, West Publishing Co.,1975.

none;10 minutes;college/university

REVIEW QUESTIONS FOR INTRO. TO ECON. ANALYSIS, 3RD HR. EXAM
(eco102; 1976;1978)
Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois

This program contains a series of ten multiple choice questions to be used as a review for the third hour examination in a course, "Introduction to Economic Analysis". The questions are on the macroeconomic material in the course. They are reproduced from the book by Donald W. Paden, "Introduction to Economic Analysis", West Publishing Co., 1975.

none;10 minutes;college/university

Economics--Mathematical models

ECONOMIC DEVELOPMENT (econdevl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using economic variables can be graphed. A list of available regions is provided and variables can be changed for each projection.

none;open-ended;persons interested in populations

FISCAL POLICY (MODEL) (tmodel;1976,77;unpublished)
Paden, Donald W; Barr, Michael
Economics Department, University of Illinois

This lesson allows the user to construct a graphic model of the economy.

touch panel;open-ended;college/university students of economics

Economics--Study and teaching

ECONOMICS SUPPLEMENTARY PACKAGE (espackage;1977;unpublished)
Paden, Donald W; Barr, Michael
Economics Department, University of Illinois

The Economics Supplementary Package (ESP) is a package of lessons designed to assist in the instruction of introductory economics. This lesson familiarizes the instructor with the ESP system - how it works and how to use it with students.

none;open-ended;instructors of introductory economics

Editor programs

PLATO

ANIMEDITOR VERSION 2.0 (animatic;1976;1977)
Frye, G. David
University of Illinois
The ANIMeditor allows one to write animated notes which are not subject to the idiosyncracies of system editors. The program is an "MFL Tag Team Presentation."
none;open-ended;any PLATO author

COMEDIT - GENERAL PURPOSE COMMON EDITOR (commedit;1977;unpublished)
Duncombe, Kevet
Iowa State University, Ames, Iowa
This general purpose common editor provides most of the features of the system common editor. It allows inspection and editing of information stored in full words or segments and also provides for search, find, transfer, zero, abort and return of the common.
none;open-ended;PLATO authors

DATASET EDITOR (dedit;1976;unpublished)
Fumento, David P; Maslikosa, Marianne M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson provides a good editor which anyone can use with their own lessons which require code in a source format, commonly an assembler or an interpreter. Several options are available through this lesson which are not a standard part of the TUTOR editor and are accessed by pressing SHIFT-DATA from the "What Dataset?" page.
none;open-ended;authors of PLATO lessons

DATASET SEARCH (dsearch;1976;unpublished)
Galcher, William M
University of Illinois
This utility program can search files which are in "dedit" type format.
none;open-ended;authors of PLATO lessons

DATASET UTILITY PACKAGE (dsedit;1976;1977)
Galcher, William M
University of Illinois
This is a utility program. It is an editor to manipulate datasets.
none;open-ended;none

DEDIT FILE PRINT FORMATTER (dprint;1976;unpublished)
Galcher, William M
University of Illinois
This lesson is designed to provide the user with the ability to format a "dedit" type dataset so that it may be printed by the system printer.
none;open-ended;authors of PLATO lessons

DISPLAY DESIGN EDITOR (dservhelp;1975;unpublished)
Halvorsen, Timothy; Resch, Paul
Comp.-based Educ. Res. Lab., U of I, Urbana
This service utility allows the user to design various graphics or text displays.
none;open-ended;PLATO lesson authors

FILE MODIFICATION SCAN (modscan;1978,79;1979)
Williams, Steven R
Comp.-based Educ. Res. Lab., Univ. of Illinois
This lesson provides the author with a means for scanning files for changes via file modwords. Information returned from scanning may be either screen displayed or sent to a nameset, specially formatted for printing.
none;open-ended;lesson authors

LESSON ACCESS CONTROLLER (accessedit;1978;unpublished)
Roper, William D
Southern Illinois University, Carbondale, IL
The program contains the access editor used by the Lesson Access Controller. The instructions on how to use the editor may be found in lesson "accesscode".
none;open-ended;PLATO site directors

LESSON COMPARATOR (comparator;1978;unpublished)
Friedman, H. George
Department of Computer Science, Univ. of Ill.
This lesson offers the user a utility lesson to compare the source text of any two TUTOR lessons.
none;open-ended;TUTOR lesson authors

NAMESET SCANNER (namescan;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., University of Illinois
The program is a utility program which scans a nameset for an alpha or an octal string. A negative search is also available which shows all records which do not contain an alpha or octal string.
none;cpen-ended;PLATO authors

NEWSPAPER (newspapers;1977;1978)
Sinder, Dale R
Electrical Engineering Department, Univ. of Illinois
This is a program allowing an author to generate a newspaper containing up to 62 articles, 40 active at one time. The articles may be indexed and cross referenced for search and retrieval. Any number of people may contribute articles to the newspaper. Limited authoring rights may be given to all PLATO users without revealing the common code.
none;open-ended;any PLATO author

RECOVER-A-CHARSET ROUTINE (recover;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., University of Illinois
The program instructs the user in how to recover a "charset" that has been accidently deleted from a TUTOR program. The program also shows how to convert a large "charset" to "char" commands.
none;open-ended;none

RECOVER-A-LINESET ROUTINE (recoverl;1978;unpublished)
Prouty, Richard M
Chemistry Dept., Univ. of Illinois, Urbana, IL
The program is a utility which will recover an accidentally deleted lineset. It will also convert a large lineset to -rdraw- commands.
none;open-ended;PLATO authors

TRANSFERRAL OF DATA (transfr;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., Univ. of Illinois
The program gives instructions to help TUTOR authors transfer data between many types of databases, i.e. datasets and namesets.
none;open-ended;PLATO authors and instructors

Education

see also Teaching

Education, Secondary

TENURE: A SIMULATION OF A FIRST YEAR OF TEACHING (tenure;1975;unpublished)
Gaede, Owen F
College of Education, U. of Illinois, Urbana IL
This is a simulation of a first year of teaching. The user must make decisions similar to those of a first year teacher in order to attain tenure and a salary increase.
none;30 minutes to 2 hours;secondary education teacher training

Educational accountability

PEER AREA PACKAGE (areapack;1976;1977)
Avner, Richard A; Tatsuoka, Kikumi; Weaver, Tamar A; et al.
Comp.-based Educ. Res. Lab., University of Illinois
This package controls the transfer of student -area- summaries (and summaries prepared by the -setdat- command) from one or more datafiles directly into a dataset. The data are stored in a very compact form available for displaying, editing, analyzing, or printing sorted data.
none;open-ended;PLATO instructors and authors

Educational games

Aeronautics

ELEMENTARY AEROSPACE ENGINEERING GAMES (aerogames;1976;1977)
Bennett, James A; Bennett, Carol D
University of Illinois
A series of games that illustrate the types of problems that face aerospace engineers. Two types of problems are presented: airplane and spacecraft.
none;open-ended;general

Arithmetic

ANTWAR (zantwar;1976;unpublished)
Seiler, Bonnie Anderson; Fortner, Brand
U of I NSF Whole numbers Elem. Math. Group
The lesson provides a game situation for working story problems in which pictures of the problems are shown. The student learns to answer correctly word problems involving arrays, comparisons and sums.
none;open-ended;upper level elementary students

ARITHMABATTLE (moonbattle;1977;unpublished)
Bloomfield, Louis
Urbana High School, Urbana, Illinois
This is a game of arithmetic facts. You will play a friend or someone elsewhere on the PLATO system. The object of the game is to solve ten problems before your opponent. The problems are either addition, subtraction or multiplication.
none;open-ended;11th grade

ASK (erswk;1977;1978)
Steinberg, Esther R
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This "twenty questions" type of game for guessing a number has a two-fold purpose: to give the student experience in generating questions which will provide maximum information and thus enable him/her to solve the problem in a minimum number of steps, and to provide a means of synthesizing and applying the student's general knowledge about numbers.
none;none;elementary students

BATTLESHIP (ccbattle;1976;1978)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
The lesson provides remediation on plotting points if student fails the checkup in =cctttest=.
none;30 minutes;intermediate algebra students

CLAIM GAME (FACTORS) (zclaim; 1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson gives the students practice in recognizing factors of numbers up to 36. It is a two person game.
none;open-ended;upper level elementary students

DARTS (darts;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Elem. Math. Group, CERL

The lesson is one in the group of Fractions Curriculum lessons which teaches "mixed numbers and fractions ≥ 1". It gives the student experience in locating fractions and mixed numbers on the number line. The lesson also includes a checkup to determine whether the student is ready for further number line work.

none;lesson: open-ended, checkup: 3-5 minutes;basic math. students

DECIMAL DARTS, PARTS 1 AND 2 (ddarts;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Elem. Math. Group, CERL

Two lessons on decimal fractions are included here as well as a checkup reviewing the material covered in Part 1. The first lesson introduces decimal names for tenths and hundredths; the second, decimal names for thousandths. Both lessons offer practice using the names to locate points on the number line.

none;lessons: open-ended; checkup: 3-5 minutes;basic math. students

FRACTIONS BASKETBALL (drib;1975;1977)
Dugdale, Sharon; Kibbey, David; Cohen, Barry; et al.
U of I NSF Fractions Elem. Math. Group, CERL

The lesson offers subtraction practice on the number line. The form is that of a game for one or two students. Given ball and basket positions on the number line, the students bounce the ball some fraction or mixed number to make a basket. The game can be played with numbers with like or unlike denominators. Difficulty adjusts to performance.

none;open-ended;students of basic mathematics

HOP GAME (zhop;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois

The lesson is in game format. It provides practice in skip counting. The student starts at a given number between -100 and 1000, and counts by intervals of 1 to 12, forwards and backwards.

none;10 minutes, repeatable;elem. students

HORSE RACE: OPEN SENTENCE DRILL (zhorserace;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois

The lesson is a game in which a student receives drill, practice and remediation in solving open sentences of several types: basic facts, multiplication by multiples of 10 and 100, division with remainders and signed number facts.

none;open-ended;intermediate level elementary students

HOW THE WEST WAS ONE + THREE × FOUR (zpiffle;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides a game-type situation in which the computational skills, ability to make combinations, and strategy win. Given three numbers, the student constructs a mathematical expression to put his playing piece in a good position on the game board and correctly evaluates the expression.
none;open-ended;upper level elementary students and older

OBSTACLE COURSE (obs;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is in game format and provides experience with the addition and subtraction of decimals.
none;open-ended;students of basic mathematics

PEEK! A PROBLEM SOLVING GAME (peekdig;1978;unpublished)
Steinberg, Esther R; Prouty, Richard M
Comp.-based Educ. Res. Lab., University of Illinois
This lesson is a reasoning type of game at several levels of difficulty. There are two related lessons that help: lesson "Can You Tell?" provides some insights about the task and lesson "What Do You Need to Know?" provides direct instruction on how to solve the PEEK problem.
touch panel;none;elementary students

PICK A TUB (tubs;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience estimating positions of pure fractions on a number line. The lesson is in game format and can be played by one or two players.
touch panel;open-ended;students of basic mathematics

PICO-FOMI (picofomi;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is a guessing game in which the student tries to figure out PLATO's number. A choice of playing a 2-digit game (easier) or 3-digit game (harder) is given. A record is kept of the numbers already guessed.
none;open-ended;elementary mathematics students

PROBABILITY GAME (wmg04;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
A probability game is presented in which the student indicates whether the number the computer presents is the largest, smallest or neither in a list of ten numbers chosen by the computer. Games are short, but one can play successive ones and the score is accumulative.
touch panel optional;2 or 3 minutes;elementary school children

ROSE (rose;1976;1978)
Sleator, Daniel; Sleator, Tycho
University of Illinois
The first three sections of this lesson generate rose patterns. The final four sections are games: Conway's Game of Life; X,Y Equation Solver Game; Morse Battle Game; Brain-o-Battle.
none;open-ended;none

THE SHUTTLE PUZZLE (shuttle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
The object of this game is to interchange black pieces with orange pieces, with all pieces ending up on opposite sides. It will later be used to derive a quadratic equation.
none;open-ended;elementary mathmatics students

SPEEDWAY (FACTS DRILL) (zspeedway;1976;unpublished)
Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson is an educational game to improve the student's speed with number facts. A game situation is provided for drill, practice, and remediation in the basic number facts involving the four basic operations.
none;open-ended;intermediate level elementary students

SPLASH! (pogo;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides general experience relating and converting fractions to integers and mixed numbers. The lesson is in game format for one or two players.
none;open-ended;students of basic mathematics

TIC TAC TOE (ttt;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is a game in which the student places points on a grid using pairs of numbers. To win the game, the student must get four continuous x's or o's in a row. Two people can play against each other, or one can play against PLATO.
none;open-ended;elementary mathematics students

TIC-TAC-TOE (ccttt;1976;unpublished)
Cohen, Donald; Glynn, Jerry; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches plotting points on a grid by using a tic-tac-toe game format.
none;30 minutes;intermediate algebra students

THE TOWER PUZZLE (tower;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is a game in which the object is to move a pile of discs from one peg to another. After practice, the student is asked to keep track of the number of moves, and the resulting table is used to illustrate a function. The student then guesses the rule. The game is the old "Tower of Hanoi" game.
none;none;elementary mathematics students

TRUE-FALSE GAME (znumgame;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson provides practice in writing number sentences involving inequalities, decimals and fractions. The student has to determine whether number sentences are true or false. The lesson is in game format with three versions available for the student's choice.
none;open-ended;upper level elementary students

WHEEL OF FORTUNE (zfortune;1976;unpublished)
Wilmot, James
U of I NSF Whole Numbers Elem. Math. Group
The lesson gives the student practice interpreting word numerals. The student is taught to write any standard word numeral up to eight digits. The lesson is in game format.
none;open-ended;upper level elementary students

Chemistry

AROMATIC SYNTHESIS GAME (areneg;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This is an interterminal game for two persons. One player makes up a compound for another player to synthesize. If the player fails to make the compound, the namer of the compound has to synthesize it himself. The first person to prepare five compounds wins the game.
none;open-ended;college/university students of organic chemistry

ELEMENTS GAME (elements;1974;1977)
Smith S - Chabay R
Chemistry Department, University of Illinois
This is an interterminal game. It is played between two players each at a different terminal. The players compete to see who can correctly provide the names or symbols of more of the elements.
none;open-ended;students in introductory chemistry

THE GREAT SYNTHESIS RACE (syng;1973;1977)
Smith S - Chabay R
Chemistry Department, University of Illinois
This is a multistep synthesis game in which two players race to perform a multistep aliphatic synthesis from randomly chosen materials. There are a mono ("syng") and a two-terminal ("syng2") version of the game. The synthesis involves the use of Grignard reactions and simple alcohol-carbonyl group interconversions.
none;66 minutes;college/university students

Electric engineering

VOLTAGE DIVISION IN SERIES/PARALLEL NETWORKS (vidiv;1975;unpublished)
Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This lesson presents voltage and current problems dealing with voltage division, network reduction and nested voltage division. At least one problem must be done to complete the exercise.
none;10 minutes;undergraduate electrical engineering students

Languages

CATEGORY (think;1974;unpublished)
Vojacek, Joe
Chicago City-Wide Colleges, Malcolm X
The lesson is designed to make the student aware of his powers of reasoning . He is given basic instructions which he must apply in order to obtain correct answers. There are nine separate puzzles to solve.
none;30 minutes;any students of English

HOMONYM PUZZLE (eng4a;1977;unpublished)
Geaither, Barbara
Malcolm X College, Chicago, Illinois
This lesson reviews homonyms through the use of a crossword puzzle. Crossword puzzle provides a fun approach for reviewing there/their/they're; your/you're; its/it's; and to/too/two.
none;20 minutes;Basic or regular English students

PICTURE INTRODUCTION TO ESPERANTO (espol;1976;1978)

Sherwood, Judith N

Comp.-based Educ. Res. Lab., University of Illinois

This lesson is a pictoral introduction to the auxiliary language, Esperanto. A crossword puzzle is included.

none;open-ended;Students of the auxiliary language, Esperanto

Law

UTILITY REGULATION LESSON 2 -- RATEMAKING SIMULATION (maggl;1979;unpublished)

Maggs, Peter B; Morgan, Thomas D; Platt, Robert C

College of Law, University of Illinois, Urbana

This simulation is designed to provide the law student with a minimum knowledge of the basic accounting and legal rules governing the regulation of rates charged by public utilities. The user plays the role of a young law graduate hired by the State Utility Commission, whose job involves making a series of decisions in the ratemaking proceedings of a phone company.

none;60 minutes;law students, business students

Medicine

DIAGNOSE 2: A GAME OF DEDUCTIVE SKILL (pdiag;1976;unpublished)

Solomon, Lawrence; Yamada, Mitsuru; Bonetti, William; et al.

Abraham Lincoln Medical School, Univ. of Illinois

In this game-type lesson the student is first given a triad of complaints, then a triad of history items, then physical items and then laboratory studies. At each step, using deductive logic, the student must select from a list the disease that would fit the given symptoms.

none;20 minutes;medical students

DIAGNOSE: A GAME OF DEDUCTIVE SKILL (diagnose;1976;unpublished)

Solomon, Lawrence; Yamada, Mitsuru; Bonetti, William; et al.

Abraham Lincoln Medical School, Univ. of Illinois

This lesson provides a deductive medical detective game that presents the student with a triad of complaints and a list of 60 diseases. Diseases not fitting the complaint must be eliminated. A triad of history items, a triad of physical items and a definitive triad of laboratory findings offer more data.

none;20 minutes;medical students

ENZYME: CLINICAL DIAGNOSIS BY LABORATORY METHODS (enzyme;1976;unpublished)

Hain, Timothy C; Ressler, Newton

Abraham Lincoln Medical School, Univ. of Illinois

This lesson uses a game format to teach the use of enzyme assays in the diagnostic process. Scoring is based on time needed to complete a case, number and aptness of assays ordered and number of correct answers. The game can be played at four levels, ranging from student to physician. A detailed help section is provided.

optional touch panel;30 minutes;medical students

EPONYMS: A GAME OF SKILL FOR MEDICAL STUDENTS (eponym;1977;unpublished)
Hain, Timothy C
Abraham Lincoln Medical School, Univ. of Illinois

This lesson is designed to help the student memorize the meanings of names of diseases or syndromes. Once in the drill the user matches the top definition or name with the correct item of the 5 items following. There are 350 definitions divided into groups of 20 or less.

none;30 minutes;medical students

GENERIC: A TEST OF SKILL IN NAMING DRUGS (generic;1976;unpublished)
Hain, Timothy C; Hunter, R. Scott
Abraham Lincoln Medical School, Univ. of Illinois

This lesson is a competitive drill. The student can choose from a list of 21 types of drugs and is presented with either a generic name and a list of brand names, or a brand name and a list of generic names. The correct answer must be selected from 5 choices. Each drill is timed and scored with about 25 trials.

none;open-ended;medical students

PHARMER: A GAME FOR PHUN WITH PHARMACY (pharmer;1977;unpublished)
Lambert, Randall; Guerra, Charles; Kahn, Kenneth ; et al.
College of Pharmacy, University of Illinois

This lesson is an interterminal game in which students match wits on various aspects of pharmacy. It includes contests concerning generic names of drugs, trade names of drugs, and Latin abbreviations.

none;open-ended;medical students, pharmacy students

Miscellaneous

FINGER PAINTING (touchpaint;1976;1978)
Gilfillan, James W
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

This lesson allows the user to create pictures by touching the screen. The pictures can be stored and viewed by the user as well as others.

touch panel;open-ended;kindergarten - elementary grades

Music

THE KEYSPINNER GAME (musgame2;1976;1977)
Peters, G. David
Music Department, University of Illinois

This music game is a drill on major and minor key signatures. A spinner randomly selects a key signature. The player must type the key corresponding to the key signature within 10 counts. A choice is given of major or minor key signature identification drills. Two players can compete against each other in the game.

none;none;college/university music students

MUSIC CONCENTRATION (musgame8;1977;1978)
Whitfield, Janice; Rassier, Daniel A
University of Illinois
The purpose of this game, which is to be played by two, is to examine your music voacbulary. The object of the game is to match the correct term with the correct symbol.
touch panel;open-ended;elementary music students

Nursing

FETAL CIRCULATION GAME (fetal;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
The lesson is one on the subject of fetal circulation. The student investigates the dictionary definitions of words used in the study of fetal circulation, inspects a series of 17 slides showing the pathways the blood takes as it goes from the placenta, through fetal vesssels, back to the placenta , and then uses the information gained to play a game.
slide selector, microfiche;50-60 minutes;nursing students

Physics

INTERTERMINAL PROBLEM SOLVING CONTEST-VECTORS AND KINEMATICS (p106con1;1976;1978)
Smith, James H; Kane, Dennis
Physics Department, University of Illinois
The object of this interterminal problem solving contest is to solve a problem in vectors or kinematics in less time than it takes an opponent to solve it. The players can accept, reject or withdraw challenges while playing. The game is played between players at different terminals.
none;open-ended;students of elementary college physics

PROJECTILE MOUNTAIN GAME AND MORE (physgame;1973;unpublished)
Bennett, Carol D
Physics Department, University of Illinois
There are four games in this program. The Projectile Mountain Game can be played with one or two players. The other games involve target hitting and/or orbit estimation.
none;open-ended;anyone

RING GAME (ring;1974;unpublished)
Bennett, Carol D
Physics Department, University of Illinois
The game consists of attempting to stop the motion of a ring which is moving. Two forces causing the motion are given, and the player must figure out a third force and where it should be applied to arrest the motion of the ring.
none;15 minutes;college/university

TORQUE GAME (torgame;1976;1978)
Bennett, Carol D
Physics Department, University of Illinois

The program consists of three "Olympic" torque games involving balancing masses on a pivoted rod. The exercises in each game are timed with time penalties for errors. The use of a touch panel is optional for playing the games.

touch panel (optional);none;students of classical mechanics

THE VECTOR OLYMPICS (vgame;1976;1977)
Sherwood, Bruce Arne
Department of Physics, University of Illinois

This program contains three vector-associated games: estimating lengths of vectors in centimeters, algebraic form of components of a vector in randomly-chosen coordinate frames, and centimeter lengths of components in such frames.

touch panel;open-ended;none

WORKOUT (workout;1976;unpublished)
Sutton, David C; Sherwood, Bruce Arne
Physics Department, University of Illinois, Urbana

This elementary level classical mechanics lesson presents four different games involving work: Polevault, Steeplechase, Hammerthrow and Sabercross.

touch panel;open-ended;physics students

Educational games

Reading

ELEMENTARY READING ON PLATO IV (readindex;1977;1978)
Corielle, Priscilla J; Yeager, Robert F; Fillman, Lezlie A; et al.
Comp.-based Educ. Res. Lab., University of Illinois

The elementary reading curriculum addresses basic de-coding skills and presents many basic words thru a "sightword" format and several interesting games. There are also some miscellaneous story formats. Heavy use is made of the audio device, since children at this level cannot read any instructions.

touch panel, audio, microfiche, 2-5 min. segments, 30 hours;K-1st grade

Spelling

ORDEAL OF THE HANGMAN (hangman;1976;1978)
Michael, Gary; Berger, Michael; Dennis, David; et al.
University of Illinois, Urbana, Illinois

The game is a spelling game, a version of the well-known game, HANGMAN, presented in an ancient setting in the year 433. Each player suspected of being a member of a secret cult must undergo an ordeal to prove his innocence, namely the spelling of 6 words without knowledge of what the words are. Failure to withstand the ordeal produces dire results!

none;variable;general

Teaching

TENURE: A SIMULATION OF A FIRST YEAR OF TEACHING (tenure;1975;unpublished)
Gaede, Owen F
College of Education, U. of Illinois, Urbana IL
This is a simulation of a first year of teaching. The user must make decisions similar to those of a first year teacher in order to attain tenure and a salary increase.
none;30 minutes to 2 hours;secondary education teacher training

Typewriting

TYPING DRILL (debugs;1975;1977)
Midden, Marshall
Computer-based Educ. Res. Lab., University of Illinois
A typing drill is presented in which the participant can compete against the records of other users. If the new time is better than others, it is listed with some of the other record holders.
none;none;none

Educational statistics

FLANDER'S DATA ANALYSIS (secedi;1974;unpublished)
Gaede, Owen F
College of Education, Univ. of Ill., Urbana IL
With this lesson the user can analyse data collected in the classroom using Flander's Interaction Analysis.
none;open-ended;teachers in secondary education/student teachers

Educational surveys

Opinion surveys (PLATO)

OPINION SURVEY AND ANALYSIS PACKAGE (opinion;1976;1977)
Siegel, Martin A
Comp.-based Educ. Res. Lab., University of Illinois
Detailed instructions are given the user of the PLATO Opinion Survey as to how to administer an opinion survey and analyze the results.
none;open-ended;PLATO teachers

Education--Costs

EDUCATIONAL COSTS AND ENROLLMENT MODEL (populs;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using educational cost and enrollment variables can be graphed. A list of available regions is provided and variables can be changed for each projection.
none;open-ended;persons interested in populations

Eigenvalues

EIGENVALUES AND EIGENVECTORS
(yeigen5;1976:1978)
Tatsuoka, Kikumi; Baillie, Robert
Computer-based Educ. Res. Lab., University of Illinois
This lesson is the second in a series of lessons on matrix algebra as applied to multivariate statistics. The lesson deals with eigenvalue problems. A glossary of matrix words is furnished also.
none:60 minutes:college/university undergraduate, graduate students

GENERAL LINEAR SYSTEMS SIMULATOR (linsys:1976;1979)
Beck, Howard W; Kuo, Benjamin C
Dept. Elec. Engineering, U of I, Urbana, Ill.
This lesson will compute the time solution of a set of linear differential equations. The user must specify the matrices, appropriate dimensions, initial condition and initial and final times over which the simulation is to be run.
none:open-ended:college/university students

Electric batteries

POTENTIALS OF METAL MACRO-ELECTRODES IN AQUEOUS SOLUTIONS
(bioinst2:1978;1979)
Beck, Howard W; Olson, Walter H
Dept. of Elec. Engineering, U of I, Urbana, Ill.
In this lesson you can simulate an experiment in which the potential of an electro-chemical cell is measured as a function of current flowing through the cell. In this way the equilibrium and non-equilibrium behavior of the cell can be examined.
none:none:college/university students

Electric circuits

COMPUTER LOGIC AND DIGITAL CIRCUITRY (logic:1976:unpublished)
Whisenhunt, Gary; Wood, Ray
Southern Illinois University, Carbondale, IL
The lesson is an elementary digital logic lesson covering number systems, binary numbers, flip flops, logical operators, and boolean algebra.
none:variable:college/university students

CURRENT SIMULATIONS: CURRENT VS. TIME (circuits:1973:1978)
Bennett, Carol D
Physics Dept., Univ. of Ill., Urbana IL
The lesson studies the relationship of current values to time in an electrical circuit. The student chooses values for the components of a circuit and PLATO plots current vs. time as found by numerical integration of the circuit equation.
none:none:students of elementary electricity and magnetism

Electric currents

POTENTIALS OF METAL MACRO-ELECTRODES IN AQUEOUS SOLUTIONS (bioinst2;1978;1979)
Beck, Howard W; Olson, Walter H
Dept. of Elec. Engineering, U of I, Urbana, Ill.
In this lesson you can simulate an experiment in which the potential of an electro-chemical cell is measured as a function of current flowing through the cell. In this way the equilibrium and non-equilibrium behavior of the cell can be examined.
none;none;college/university students

Electric engineering

Apparatus and appliances

COMPUTER-GUIDED EXPERIMENTATION (cge;1974;unpublished)
Neal, James P
Dept. of Elec. Engr., University of Illinois
This program describes the Computer-Guided Experimentation-PLATO system, a system designed to provide unique and worthwhile improvements in undergraduate or technician laboratory instruction when properly used by competent instructors.
The CGE laboratory station links sensors on electrical equipment with the PLATO console allowing numerous expts.
CGE interface; sundry elec. equip.;open-ended;college/university

Calculators

THE THREE AMPLIFIER BIQUAD FILTER (filters;1977;unpublished)
Fries, Keith L
Dept. of Electrical Engineering, Univ. of Illinois
This lesson will investigate the three amplifier biquad low-pass filter which is considered because of its flexibility, low sensitivity and ease of tuning.
none;none;advanced electrical engineering students

Electric networks

CONVENTIONAL CURRENT (elenan3;1975;unpublished)
Weston, Paul; Yen, Bob
Dept. of Electrical Engineering. Univ. of Illinois
This introductory exercise on network analysis presents a simple illustration of current as the net flow of positive charge.
none;5 minutes;undergraduate students of electrical engineering

KIRCHHOFF'S VOLTAGE AND CURRENT LAWS FOR IDEAL SOURCES I (kfpb1;1976;1977)
Fries, Keith L
Dept. Elec. Engin., University of Illinois
This is a drill lesson, asking the student to solve a network involving ideal voltages and current sources.
none:30 minutes:college/ university

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KIRCHHOFF'S VOLTAGE AND CURRENT LAWS FOR IDEAL SOURCES II
(kvcldemo;1977;1979)
Fries, Keith L
Electrical Engineering Dept., Univ. of Illinois
This program is the drill lesson on Kirchhoff's voltage and current laws which has a user-editable capability for the networks to be studied. Students may input element values for each of ten networks provided, or instructors may design networks suitable for their own purposes in lieu of using the available networks.
none;open-ended;college/university

THE RESISTOR (resistor;1975;unpublished)
Weston, Paul; Yen, Bob
Dept. of Electrical Engineering, Univ. of Illinois
This exercise provides drill material on Ohm's law and the resistor.
none;26 minutes;undergraduate electrical engineering students

RL AND RC TRANSIENTS (rlrc;1975;unpublished)
Weston. Paul
Dept. of Electrical Engineering, Univ. of Illinois
This exercise provides the student with practice using single time-constant RL and RC networks with step sources. Help is available as well as descriptions of the various parameters.
none;none;undergraduate electrical engineering students

RLC: PARALLEL RLC CIRCUIT ANALYSIS (tnlab;1975;unpublished)
Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This lesson simulates transient analysis of RLC networks. The student chooses the variables for the system to be analyzed. Detailed instructions are provided.
none;none;undergraduate electrical engineering students

SERIES/PARALLEL NETWORKS (spdecomp;1975;unpublished)
Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This introductory network analysis lesson provides a drill in the analysis of series/parallel resistor networks.
none;22 minutes;undergraduate electrical engineering students

VOLTAGE AND CURRENT SOURCE (visource;1975;unpublished)
Weston, Paul; Kesler, Paula
Dept. of Electrical Engineering, Univ. of Illinois
This is a brief exposition, in practice form, of some properties of the ideal sources. The student controls the voltage, PLATO controls the resistance value, and the object is to keep the current at .04 amps while parameters change.
none;9 minutes;undergraduate electrical engineering students

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VOLTAGE DIVISION IN SERIES/PARALLEL NETWORKS (vidiv;1975;unpublished)
Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This lesson presents voltage and current problems dealing with voltage division, network reduction and nested voltage division. At least one problem must be done to complete the exercise.
none;10 minutes;undergraduate electrical engineering students

Electric engineering - Mathematics

COMPUTER LOGIC AND DIGITAL CIRCUITRY (logic;1976;unpublished)
Whisenhunt, Gary; Wood, Ray
Southern Illinois University, Carbondale, IL
The lesson is an elementary digital logic lesson covering number systems, binary numbers, flip flops, logical operators, and boolean algebra.
none;variable;college/university students

MANIPULATING LOGICAL EXPRESSIONS (minbool;1975;1977)
Meller, David V
Comp.-based Educ. Res. Lab., University of Illinois
This is a utility program. It introduces the concepts of simplification and minimization and allows simplification or minimization of logical expressions. It does not provide an introduction to Boolean Algebra. It assumes that the student can write Boolean expressions.
none;open-ended;college/university

Electric fields

PHASORS (VECTOR) DIAGRAMS (phasors;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
The program illustrates the technique of constructing interference patterns from addition of electric field vectors. HELP is available and a quiz, which can be taken at any time, completes the lesson.
none;none;students of modern elementary physics

Electric laboratories

COMPUTER-GUIDED EXPERIMENTATION (cge;1974;unpublished)
Neal, James P
Dept. of Elec. Engr., University of Illinois
This program describes the Computer-Guided Experimentation-PLATO system, a system designed to provide unique and worthwhile improvements in undergraduate or technician laboratory instruction when properly used by competent instructors. The CGE laboratory station links sensors on electrical equipment with the PLATO console allowing numerous expts.
CGE interface; sundry elec. equip.;open-ended;college/university

Electric measurements

COMPUTER-GUIDED EXPERIMENTATION (cge;1974;unpublished)
Neal, James P
Dept. of Elec. Engr., University of Illinois
This program describes the Computer-Guided Experimentation-PLATO system, a system designed to provide unique and worthwhile improvements in undergraduate or technician laboratory instruction when properly used by competent instructors. The CGE laboratory station links sensors on electrical equipment with the PLATO console allowing numerous expts.
CGE interface; sundry elec. equip.;open-ended;college/university

Electric networks

CONVENTIONAL CURRENT (elenan3;1975;unpublished)
Weston, Paul; Yen, Bob
Dept. of Electrical Engineering, Univ. of Illinois
This introductory exercise on network analysis presents a simple illustration of current as the net flow of positive charge.
none;5 minutes;undergraduate students of electrical engineering

KIRCHHOFF'S VOLTAGE AND CURRENT LAWS FOR IDEAL SOURCES I (kfpbl;1976;1977)
Fries, Keith L
Dept. Elec. Engin., University of Illinois
This is a drill lesson, asking the student to solve a network involving ideal voltages and current sources.
none;30 minutes;college/ university

KIRCHHOFF'S VOLTAGE AND CURRENT LAWS FOR IDEAL SOURCES II (kvcldemo;1977;1979)
Fries, Keith L
Electrical Engineering Dept., Univ. of Illinois
This program is the drill lesson on Kirchhoff's voltage and current laws which has a user-editable capability for the networks to be studied. Students may input element values for each of ten networks provided, or instructors may design networks suitable for their own purposes in lieu of using the available networks.
none;open-ended;college/university

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Weston, Paul; Yen, Bob
Dept. of Electrical Engineering, Univ. of Illinois
This exercise provides drill material on Ohm's law and the resistor.
none;26 minutes;undergraduate electrical engineering students

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Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This exercise provides the student with practice using single time-constant RL and RC networks with step sources. Help is available as well as descriptions of the various parameters.
none;none;undergraduate electrical engineering students

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Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This lesson simulates transient analysis of RLC networks. The student chooses the variables for the system to be analyzed. Detailed instructions are provided.
none;none;undergraduate electrical engineering students

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Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This introductory network analysis lesson provides a drill in the analysis of series/parallel resistor networks.
none;22 minutes;undergraduate electrical engineering students

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Weston, Paul; Kesler, Paula
Dept. of Electrical Engineering, Univ. of Illinois
This is a brief exposition, in practice form, of some properties of the ideal sources. The student controls the voltage, PLATO controls the resistance value, and the object is to keep the current at .04 amps while parameters change.
none;9 minutes;undergraduate electrical engineering students

VOLTAGE DIVISION IN SERIES/PARALLEL NETWORKS (vidiv;1975;unpublished)
Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This lesson presents voltage and current problems dealing with voltage division, network reduction and nested voltage division. At least one problem must be done to complete the exercise.
none;10 minutes;undergraduate electrical engineering students

Electricity

CURRENT SIMULATIONS: CURRENT VS. TIME (circuits;1973;1978)
Bennett, Carol D
Physics Dept., Univ. of Ill., Urbana IL
The lesson studies the relationship of current values to time in an electrical circuit. The student chooses values for the components of a circuit and PLATO plots current vs. time as found by numerical integration of the circuit equation.
none;none;students of elementary electricity and magnetism

Electrocardiography

ELECTROCARDIOGRAPHY (ekg0;1974;1978)
Smetzer, David L; Koehn, Charles E
College of Veterinary Medicine, University of Illinois
The lesson describes by animated graphics the sequence of spread of electrical activity through the normal heart and relates the spread of electrical activity to the genesis of the electrocardiogram. The lesson is non-interactive as far as the student is concerned.
none;one hour;students of veterinary medicine

INTERPRETATION OF EKG (cardiol;1977;unpublished)
Flanders, Samuel J
Peoria School of Medicine, University of Illinois
In this lesson the student is given a basic introduction to the use of electrocardiograms in physical diagnosis, including how they are made and how to read them.
none;none;first year medical students

INTRO. TO THE ELECTRICAL ACTIVITY OF MYOCARDIAL TISSUE: EKG (elcardio;1976;unpublished)
Frasher, Wallace G; Rikel, James E
University of Southern California
This lesson discusses how cellular events combine in the heart to produce a regulated sequence of muscular contractions and how electrical activity in the excitation process produces a signal at the surface of the body which permits recording and electrocardiogram.
none;15 minutes;first year medical students

Electrochemistry

POTENTIALS OF METAL MACRO-ELECTRODES IN AQUEOUS SOLUTIONS (bioinst2;1978;1979)
Beck, Howard W; Olson, Walter H
Dept. of Elec. Engineering, U of I, Urbana, Ill.
In this lesson you can simulate an experiment in which the potential of an electro-chemical cell is measured as a function of current flowing through the cell. In this way the equilibrium and non-equilibrium behavior of the cell can be examined.
none;none;college/university students

Electrodes

ION SELECTIVE ELECTRODES (vuise;1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is designed for students in quantitative analysis. It introduces the concepts of ion selective electrodes and describes how the various types of electrodes work.
none;45 minutes;chemistry students of quantitative analytic chemistry

Electrodes, Glass

ION SELECTIVE ELECTRODES (vuise;1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana

The lesson is designed for students in quantitative analysis. It introduces the concepts of ion selective electrodes and describes how the various types of electrodes work.

none;45 minutes;chemistry students of quantitative analytic chemistry

Electrolyte metabolism

FLUIDS AND ELECTROLYTE BALANCE IN THE NEONATE (fluids;1978;unpublished)
Buchholz, Linda M
University of Wisconsin, Madison, Wisconsin

This lesson is designed to acquaint neonatal intensive care personnel with the basic principles involved in fluid and major electrolyte balance of the neonate.

touch panel;none;nursing students

Electron microscope

THE HITACHI VACUUM SYSTEM (ceml;1976;unpublished)
Davis, Daniel L
Center for Electron Microscopy, U of I, Urbana, Ill.

This is a "how-to-use" lesson that will teach the student to operate the Hitachi Transmission Electron Microscope Vacuum System. The student can then practice his knowledge, using the on-line simulation. A list of things to try is provided.

none;open-ended;students of electron microscopy

Electronic circuits

CAMGIC: COMP. AIDED MASK GENERATION FOR INTEGRATED CIRCUITS (camgic;1977;1978)
Sinder, Dale R
Electrical Engineering Department, Univ. of Illinois

The object of this lesson is to learn how to generate computer-aided masks for integrated circuits by means of a CAMGIC circuit editor.

none;open-ended;college/university

A LOOK INTO INTEGRATED CIRCUIT TECHNOLOGY (plogichdw;1976;1978)
Lorenc, Dan; Funk, Bob
Computer Science Dept., University of Illinois

The lesson describes the advantages of integrated circuits over discrete circuitry particularly in reduced size and lower cost. The lesson discusses many aspects of such sophisticated technology.

none;none;college/university

Electronic music

THE GOOCH SYNTHETIC WOODWIND (A DEMONSTRATION) (gswdemo;1976;unpublished)
Gooch, Sherwin J; Thomasson, James; Fisher, Norman R
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This is a demonstration lesson of the Gooch Synthetic Woodwind, which produces music from instructions sent to it by a PLATO IV student terminal. A brief description of the PLATO IV Music System is included.
Gooch Synthetic Woodwind (Music Box);open-ended;general

GSWAIDS (gswaids;1978;unpublished)
Gooch, Sherwin J
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
GSWAIDS and associated files are a group of utility routines that are designed to make use of the Gooch Synthetic Woodwind (GSW), which is a device that produces music from instructions transmitted to it through a PLATO-V Student Terminal.
Gooch Synthetic Woodwind (Music Box);open-ended;general

Electronics

THE THREE AMPLIFIER BIQUAD FILTER (filters;1977;unpublished)
Fries, Keith L
Dept. of Electrical Engineering, Univ. of Illinois
This lesson will investigate the three amplifier biquad low-pass filter which is considered because of its flexibility, low sensitivity and ease of tuning.
none;none;advanced electrical engineering students

Electrons

IONIC BONDING (ionic;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson deals with the formation and nature of ionic bonds and the use of Lewis Dot structures to represent ionic compounds. The student learns to recognize common types of ionic compounds (acids, bases and salts).
touch panel;27 minutes;college/university students

RESPIRATION AND ENZYMES (respir;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the general scheme of glycolysis, Krebs cycle and electron transport. It also helps the student to understand the relationship of glycolysis to aerobic respiration.
none;45 minutes;college/university students

Electrophysiology

NEUROPHYSIOLOGY LABORATORY (actpot2;1977;unpublished)
Woods, James; Lawrance, David P; McCraw, Gordon W; et al.
University of Oklahoma / University of Illinois
This lesson is designed for the student of electrophysiology. A simulation of typical electrophysiologic laboratory procedures and concepts such as graded stimuli, spatial summation and temporal summation are presented.
none;open-ended;first year medical or graduate students

Ellipse

EXPERIMENTING WITH ELLIPSES (ellipse;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
In this lesson the student is asked to supply two numbers (A and B) in an open sentence. PLATO then plots the graph.
none;open-ended;elementary mathematics students

Embolism

PULMONARY EMBOLISM (shp44;1975;unpublished)
Russell, Lawrence
Sheppard Air Force Base, Texas
This lesson defines the terms associated with pulmonary embolism, describes the difference between pulmonary circulation and systemic circulation, lists the sequence of events which can follow pulmonary embolism, and discusses the treatment and prevention of the disease.
none;2 hours;physicians' assistants

Emergency medical services

DIFFERENTIAL DIAGNOSIS GI HEMORRHAGE (gihem;1975;unpublished)
Trachtenbarg, David E; Poncher, Randy
Abraham Lincoln School of Medicine, Univ. of Illinois
In this simulation lesson, the user acts as a first-year resident and sees a pediatric patient in the emergency room. The supervisor asks questions about many of the resident's decisions to see if knowledge of the basic medical facts is sound. Decisions must be made about managing the patient in terms of history, lab, physical exam and treatment.
none;14 minutes;medical students

EMERGENCY MEDICINE: CARDIAC ARREST (arrest;1977;unpublished)
Winterhalter, Joseph D; Bonetti, William
U of I Medical School, Cntr. for Ed. Development
In this lesson simulation, a stocky white middle-aged female is wheeled into the emergency room on a gurney. One attendant compresses the patient's chest as the other holds an oxygen mask over her mouth. The student is called upon to make a series of decisions concerning the management of this patient.
microfiche;none;medical students

IT'S A JUNGLE OUT THERE (stress;1978;unpublished)
Sabbour, M. Saddeck; Nelson, Charles D; Kemp, Larry
U of I Medical School. Cntr. for Ed. Development
In this simulation, Lushwell Smirnoff, 41-year-old business executive, passes out after "passing some motions" during a heated board meeting at work. He is brought to the emergency room where it is a slow night, and the user has the opportunity to do a history, physical, lab workup and emergency treatment. Procedures are summarized at the end.
none;25 minutes;medical students

PHYSICIAN SELF-ASSESSMENT III (psa03;1974;unpublished)
Lackmann, John; Bloomfield, Louis; Dubrow, Ira
Abraham Lincoln Medical School, University of Illinois
In this simulated emergency, the user, as doctor, is awakened in the middle of the night by a phone call from a frantic mother. Her baby has an earache and is tugging at his ears. The doctor must decide whether to meet her at the emergency room right away, send her out for a prescription, or have her call back in the morning.
optional touch panel;open-ended;medical students

PHYSICIAN SELF-ASSESSMENT VI (psa06;1976;unpublished)
Lackmann, John; Chen, Thomas; Yamada, Mitsuru; et al.
Abraham Lincoln School of Medicine, Univ. of Illinois
This lesson simulates an emergency room call for a man suffering from welts. Initial contact is by phone, as the doctor (the user) is awakened in the night. The doctor sees the patient, takes history, physical, does lab tests, admits man to the hospital and prescribes proper treatment. Procedures are summarized at the end and the student is graded.
microfiche, optional touch panel;open-ended;medical students

Emphysema, Pulmonary

PNEUMOTHORAX AND INTERSTITIAL EMPHYSEMA (pneumo;1977;unpublished)
McCraw, Gordon W; Lawrance, David P; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of interstitial emphysema and pneumothorax. The classification schema presented includes that favored by pathologists and that used by clinicians. The material is presented in a highly indexed outline format, facilitating access to specific areas.
optional touch panel;none;first year medical students

Endocrinology

DRUGS: ADRENAL STEROIDS (kumc43;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson first reviews some diseases of hyper- and hypothyroidism, then discusses the therapeutic use of steroid drugs in their treatment.
none;10 minutes;first year medical students

DRUGS: INSULIN AND ORAL HYPOGLYCEMIC AGENTS (kumc58;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides some background material on diabetes and discusses the effects of insulin and other oral hypoglycemic agents on the condition.
none;10 minutes;first year medical students

DRUGS: ORAL CONTRACEPTIVES (kumc44;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson discusses oral contraception through hormone inhibition of the normal menstrual cycle. Some of the adversities are also mentioned.
none;15 minutes;first year medical students

DRUGS: THYROID AGENTS (kumc49;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson describes and reviews hyper- and hypo- thyroid conditions, treats the function of the thyroid gland, and discusses some thyroid agents and their effect upon the gland.
none;10 minutes;first year medical students

ENDOCRINE PHARMACOLOGY (endopharm2;1976;unpublished)
Kauffman, Frederick; Schwartz, Sandra
School of Medicine, Univ. of Maryland, Baltimore
This lesson reviews hormones and hormone actions, relating actions and uses of drugs to the endocrine system. The major classes of endocrine agents and general sites of action, as well as the major mechanisms of action of these agents, are discussed.
none;10 minutes;first year medical students

Endometrium--Cancer

ORAL CONTRACEPTIVES AND NEOPLASIA (ocneo;1979;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the types of epidemiological studies used to investigate the possible relationships between oral contraceptive use and neoplasia. The risk factors for contracting breast, cervical, endometrial, and liver cancer are reviewed, and the results of studies relating oral contraceptive use to the aforementioned cancers are presented.
none;30 minutes;first year medical students/health science students

Endoplasmic reticulum

CELL INJURY II: ORGANELLE CHANGES: ACUTE CELL INJURY (cell2;1977;unpublished)
Mergner, Wolfgang; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore

This lesson stresses the biochemical and structural changes in acute cell injury, as well as altered organelles. Mitochondrial changes are discussed in detail and compared to changes in the cytosol, nucleus, lysosol, cell membrane and endoplasmic reticulum. Reaction to cell injury is subdivided into three phases: before, at or after the point-of-no-return.

none;45 minutes;first year medical students

Energy

see also Force and energy

Kinetic

STORED ENERGY (work;1977;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois

The lesson treats the general work-energy equation, including thermal and other internal energies (essentially the first law of thermodynamics, but in a mechanics setting) with emphasis on how the choice of subsystem affects the form of work-energy equation.

touch panel;80 minutes;college/ university

WORK AND KINETIC ENERGY (FOR CONSTANT FORCES) (dz;1975;1978)
Kane, Dennis
Physics Department, University of Illinois

The lesson discusses work and kinetic energy for constant forces. The sections on work and on kinetic energy each begin with a review of the basic concepts involved. The lesson ends with a quiz which must be completed to obtain credit for completing the lesson.

none;70 minutes;college/university

Potential

BASIC THERMODYNAMICS QUIZ (mthermo2;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences. Univ. of Illinois

This lesson contains diagnostic and problem solving sections on thermodynamics. Three diagnostic drills cover the basic concepts of free energy, entropy and electromotive potential. The problem solving section combines practical applications with sufficient help to lead the student to the correct answers.

none;45 minutes;first year medical students

STORED ENERGY (work;1977;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson treats the general work-energy equation, including thermal and other internal energies (essentially the first law of thermodynamics, but in a mechanics setting) with emphasis on how the choice of subsystem affects the form of work-energy equation.
touch panel;80 minutes;college/ university

Energy metabolism

ENERGY (nutr6;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
The sixth lesson in the Nutrition Series discusses the measurement and requirements of energy in relation to the body.
none;25-30 minutes;nutrition students

English as a second language

see English language--Study and teaching--Foreign students

English language

Capitalization

CAPITALIZATION DIAGNOSTIC TEST (eldc;1974;unpubl.)
Magidson, Errol; Kraatz, James M
Kennedy-King College, Chicago, Illinois
This lesson provides a diagnostic test in basic capitalization. Nineteen categories are covered in 39 total items. This figure is adjustable and may be varied to suit instructional need. Student receives diagnosis of those forms in which he made mistakes, e.g. religious capitals, proper names, etc.
none;30 minutes;Basic, especially GED students

CAPITALIZATION II (caps2;1977;unpublished)
Gorun, Elise Spencer
Chicago Urban Skills Institute, Chicago, Illinois
This lesson introduces the student to the rules of capitalizing geographic sections, directions and addresses. The exercises given after the instruction allow the student to practice his knowledge of the rules. There is a ten question test at the end of the lesson.
none;20 minutes;Basic English students

CAPITALIZATION III (caps3;1977;unpublished)
Gorun, Elise Spencer
Chicago Urban Skills Institute, Chicago, Illinois

This lesson is to familiarize the student with the capitalization rules for time, events, organizations, and subjects. The lesson includes explanation, practice exercises, a final review, and a 14 sentence test to cover the above-stated topics.

none;20 minutes;Basic English students

CAPITALIZATION OF NAMES AND TITLES (caps; 1977;unpublished)
Gorun, Elise Spencer
Chicago Urban Skills Institute, Chicago, Illinois

In this lesson capitalization rules on names and titles are presented. Six practice sentences are provided followed by a ten sentence quiz. Student must type in corrections needed.

none;15 minutes;Basic or remedial English students

COMMON AND PROPER NOUNS (nouns;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson will give students instruction and practice in identifying common and proper nouns.

none;25-30 minutes;Basic English students

Composition and exercises

ADJECTIVE CLAUSES (adjc;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson introduces the student to adjective clauses. Four parts include: recognition of adjective clauses; when to use who/whom/which/that; how to punctuate an adjective clause; placement of adjective clause within a sentence. Examples and quizzes are given.

none;50 minutes;Regular composition students

ADVERBIAL CLAUSE (advc;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson helps the student recognize adverbial clauses in complex sentences. Three parts include: recognition; correction; and punctuation of adverbial clause fragments. Exercises and quizzes are included.

none;25 minutes;Regular composition students

ASSEMBLING SENTENCES AND PARAGRAPHS (rhetoric;1975;unpublished)
Vojacek, Joe; Yamada, Mitsuru
Malcolm X College, Chicago, Illinois

This lesson will give the student practice in assembling words into sentences and sentences into a paragraph. Two major sections are included. The first is scrambled words which allows the student to rearrange words to form acceptable sentences; the second is scrambled sentences which the student must organize to form paragraphs.

none;45 minutes;Composition or reading students

BIBLIOGRAPHY (bib;1974,77;unpubl.)
Bator, Robert
Kennedy-King College, Chicago, Illinois

This lesson familiarizes and gives the student practice with bibliographic form. Six parts include basic bibliographic form plus a sample of annotated bibliography and some suggestions regarding some basic library reference work.

none;60 minutes;Students in any course requiring term paper

COMMAS WITH NONRESTRICTIVES I (cain01r;1977;unpublished)
Cain, Betty
Kennedy-King College, Chicago, Illinois

This lesson illustrates the use of the comma in nonrestrictive elements. The five-part lesson includes sections on two basic comma rules, recognizing nonrestrictive elements, and making decisions on comma usage. Examples and exercises accompany each section.

none;20 minutes;Composition students

COMMAS WITH NONRESTRICTIVES II (cain02r;1977;unpublished)
Cain, Betty
Kennedy-King College, Chicago, Illinois

This lesson illustrates the proper use of commas with restrictive and nonrestrictive elements. Explanations and exercises are presented on comma usage in restrictive and nonrestrictive elements and the final section asks for the student's opinion on using commas in seven "open-ended" sentences.

none;20 minutes;Composition students

COMPOUND SENTENCES (WITH COMMA, CONJUNCTION) (compound2;1975;1979)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson presents the compound sentence having a comma and conjunction.

none;90 minutes;regular composition students

CORRECT USAGE (usage;1978;unpublished)
Vojacek, Joe
Malcolm X College, Chicago, Illinois
This lesson has the student recognize and correct misused words of the type found in usage or diction section of handbooks. Six sets of exercises are provided. The student spots the word misused in a sentence and types in the correction, e.g., he types "an" before "hour" to replace the word "a".
dictionary;60 minutes;GED, basic, remedial, composition students

DIRECT AND INDIRECT OBJECTS (do;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson provides the student with an explanation of direct and indirect objects. The lesson includes 13 sections, some dealing with the various uses of direct and indirect objects and some quizzing the student on application of these uses.
none;60 minutes;Regular composition students

DIRECT AND INDIRECT QUOTATIONS (thompson3;1976;unpublished)
Thompson, Marguerite
Wright College, Chicago, Illinois
This lesson provides an explanation of direct and indirect quotations and is accompanied by ten exercises. The majority of the lesson is script.
none;15 minutes;Composition students

DIRECT QUOTATIONS I (thompson1;1976;unpublished)
Thompson, Marguerite
Wright College, Chicago, Illinois
This lesson gives the student an introduction to simple and interrupted quotations. Examples and explanations are provided to introduce the student to simple and interrupted quotations.
none;15 minutes;Composition students

DIRECT QUOTATIONS II (lipscomb4;1974;unpublished)
Lipscomb, Delores
University of Illinois Circle Campus, Chicago
This lesson instructs the student in the proper use of quotation marks with direct quotations. Explanation followed by exercises and review allow the student to practice what he is learning.
none;15 minutes;Composition students

EDITING A PARAGRAPH I (pgraph1;1977;unpublished)
Bator, Robert; Yamada, Mitsuru
Malcolm X and Kennedy-King College, Chicago, Illinois
This lesson is to improve editing skills of a student in recognizing wordiness, spelling and capitalization errors. The student is presented with a choice of four paragraphs and is instructed to edit where necessary. Each paragraph emphasizes a different area.
none;60 minutes;Composition students

EDITING A PARAGRAPH II (pgraph2;1977;unpublished)
Ibbs, William; Yamada, Mitsuru
Malcolm X College, Chicago, Illinois
This lesson is to introduce the student to the concept of editing and allow practice in correcting misspellings in a paragraph. An explanation of editing is given. The student is presented with a choice of three paragraphs and is instructed to edit where necessary.
none;60 minutes;Composition students

EDITING A PARAGRAPH III (pgraph3; 1977;unpublished)
Ibbs, William; Yamada, Mitsuru
Malcolm X College, Chicago, Illinois
This lesson will give student practice in editing a paragraph by correcting misspelled words, non-capitalized words, and incorrect word forms. The student is presented with a choice of five paragraphs and is instructed to edit where necessary.
none:80 minutes;Composition students

EDITING A PARAGRAPH IV (pgraph4; 1977;unpublished)
Bator, Robert; Yamada, Mitsuru
Kennedy-King and Malcolm X College, Chicago, Illinois
This lesson is to improve student recognition and correction of basic errors in diction and punctuation. Several paragraphs are provided to give practice in correction in context. The student is presented with a choice of four paragraphs and is instructed to edit where necessary.
none;80 minutes;Composition students

EDITING A PARAGRAPH V (pgraph5;1977;unpublished)
Bator, Robert; Yamada, Mitsuru
Kennedy-King and Malcolm X Colleges, Chicago, Ill.
This lesson provides the student with practice in recognizing errors of punctuation, capitalization and usage.
none;60 minutes;composition students

EDITING A PARAGRAPH VI (pgraph6;1977;unpublished)
Sweany, Joan; Yamada, Mitsuru
Malcolm X College, Chicago, Illinois
This lesson providès student with experience in recognition and correction in editing sentences within a paragraph. It has three paragraphs, each containing 20 errors (in punctuation and individual words) which student must identify and correct.
none;45 minutes;Composition students

EDITING A PARAGRAPH VII (ged1;1974;unpublished)
Magidson, Errol; Yamada, Mitsuru
Kennedy-King and Malcolm X Colleges, Chicago, Ill.
This lesson will help improve student editing skills; to get the student to recognize and correct commonly misused words. Student may select from four paragraphs of different subjects.
none;90 minutes;GED, basic, remedial, any composition students

FOOTNOTES I (footnotes;1977;unpubl.)
Bator, Robert
Kennedy-King College, Chicago, Illinois
This lesson familiarizes and gives the student practice with footnotes. Two major parts include: basic footnote form of books, periodicals, encyclopedias, interviews, and newspapers; and complicated footnote forms.
none;60 minutes;Composition or term paper students

FOOTNOTES IN TERM PAPER (footnotes1;1975;unpubl.)
Bator, Robert
Kennedy-King College, Chicago, Illinois
This lesson presents a piece of student writing to serve as an example of correct footnote usage. The term paper, "Abortion Should Be Legalized," utilizes many of the footnote forms discussed in the lesson, "footnotes." A thesis statement and an outline are included.
none;35 minutes;composition students

GERUNDS (ger;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson provides the student with an explanation of gerunds. Thirteen parts include gerunds as subjects, past gerund phrases, gerunds as objects, gerund fragment/run-on repair and possession of the gerund.
none;60 minutes;Regular composition students

INFINITIVES (infit;1975;1978)

Barr, Doris
Parkland College, Champaign Illinois

This lesson introduces the student to the infinitive and its uses. Four parts include the infinitive as: a form of the verb; a subject; an object; a run-on (showing repair). Exercises and quizzes are included.

none;35 minutes;Regular composition students

AN INTRODUCTION TO SENTENCES (eng92m;1974;1978)

Wallace, Sally
Parkland College, Champaign, Illinois

This lesson introduces the student to the concept of a complete sentence. Five parts include a ten question quiz requiring the student to recognize the difference between a complete and incomplete sentence. Concept of dependent clause is reviewed.

none;15 minutes;Basic English students

IRREGULAR VERBS (eng92f;1974;1978)

Wallace, Sally
Parkland College, Champaign, Illinois

This lesson gives the student practice in irregular verbs. Sixteen parts include the verbs "to be" and "to have" plus a review of present perfect tense and irregular verbs such as "burst," "shrink," etc. A test ends the lesson.

none;30 minutes;Basic composition students

IRRELEVANT DETAILS IN PARAGRAPHS (lipscomb1;1974;unpublished)

Lipscomb, Delores
University of Illinois, Chicago Circle Campus

This lesson provides a guideline for the student to follow in order to write paragraphs which are free of irrelevant details. The lesson presents sample paragraphs and exercises. The student is asked to recognize only those sentences which are relevant.

none;10 minutes;composition students

MORE TERRIFIC THINGS ABOUT VERBS (eng92g;1974;1978)

Wallace, Sally
Parkland College, Champaign, Illinois

This lesson gives the student practice with irregular verbs. Eleven parts, including an explanation of transitive and intransitive verbs, plus exercises involving the use of the irregular verbs lie-lay/rise-raise/sit/set.

none;30 minutes;Basic composition students

POSSESSIVE FORMS OF NOUNS (engla;1977;unpublished)
Geaither, Barbara
Malcolm X College, Chicago, Illinois

This lesson gives the student practice in forming the possessive of singular and plural nouns. It presents explanations, examples, and practice exercises in possessive formations. The final comprehensive exercise involves a fill-in chart containing four distinct areas (singular, singular possessive, plural, and plural possessive).

none;30-60 minutes;Composition students

PRONOUN AGREEMENT (lipscomb5;1974;unpublished)
Lipscomb, Delores
University of Illinois Circle Campus, Urbana, Illinois

This lesson introduces the student to agreement between pronouns and their antecedents. A review of the pronoun is followed by an explanation on pronoun agreement. Exercises, including indefinite pronouns, give the student practice in identifying singular and plural pronouns.

none;15 minutes;Composition students

PROOFREADING (headline;1977;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois

This lesson's purpose is to sensitize the student to proofreading and spelling especially through the recognition of misplaced and misused words. Four part index covers typos, misplaced modifiers, ambiguous words, puzzling prepositions and a final drill.

none;20 minutes;Composition students, especially basic or remedial.

PROPER NOUNS (proper;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson is divided into 2 major sections. Section one defines proper nouns. Section two consists of a final assisted quiz and a final lesson test.

none;none;College English students

QUOTATIONS I (quote1;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson introduces the student to the use of quotation marks. It includes an explanation of quotation marks with an emphasis on quotations at the end of sentences.

none;25-30 minutes;Regular composition students

QUOTATIONS II (quote2;1978;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson introduces the student to the use of quotations at the beginning of sentences. It includes a short lesson with a review followed by a quiz and a 10-sentence lesson test.
none;15 minutes;Regular composition students

QUOTATIONS III (quote3;1978;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson introduces the student to the use of quotation marks at the end of sentences. It includes examples and quizzes.
none;30 minutes;Regular composition students

QUOTATIONS IV (quote4;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson on quotations emphasizes their use in indirect questions and quoted questions. The three major divisions of the lesson are 1) direct, unquoted questions, 2) indirect questions, and 3) quoted questions.
none;30 minutes;Regular composition student

QUOTATIONS WITH CHANGING SPEAKERS (thompson2;1976;unpublished)
Thompson, Marguerite
Wright College, Chicago, Illinois
This lesson gives the student instruction in using quotations of more than one sentence and in quotations with changing speakers. Explanations and examples are provided to illustrate the proper use of quotation marks in situations where the speaker says more than one sentence.
none;30 minutes;Composition students

SEMICOLONS I (smcol;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson introduces the basic rules of the semicolon. Three parts include semicolon with five types of subjects, subject-verb sets, identification. Each part contains exercises and a quiz.
none;45 minutes;Regular composition students

SEMICOLONS II (smco2;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson introduces the use of semicolons with adverbs. Exercises and quizzes with emphasis on using semicolons with the adverbs: nevertheless: consequently; subsequently; thus; however; therefore.
none;30 minutes;Regular English students

SEMICOLONS III (smco3;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson introduces the student to placement and punctuation of adverbs in sentences. It includes adverbs at the beginning, middle and end of sentences. There are quizzes for each part plus a final test covering all three sections.
none;15-20 minutes;Regular composition students

SUBJUNCTIVE (subjunct;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson introduces the student to the subjunctive mood. The two basic sections are: present and past (each is further sub-divided).
none;40 minutes;Regular composition students

TINY TEST ON GRAMMAR AND USAGE (eng92j:1974:1978)
Wallace, Sally
Parkland College, Champaign, Illinois
This lesson provides a test on grammar and usage. Six sections cover nouns, verbs, complete and incomplete sentences, why sentences are incomplete, and irregular verbs.
none;30 minutes;Basic composition students

TOPIC SENTENCES (lipscomb2;1974;unpublished)
Lipscomb, Delores
University of Illinois, Circle Campus
This lesson will aid the student in focusing his thoughts while writing and instruct in the writing of topic sentences. It discusses the process for selecting and limiting a topic on which to write and includes exercises which have the student actually write topic sentences.
none;15 minutes;Composition students

USAGE DIAGNOSTIC TEST (eldu;1974;unpublished)
Magidson, Errol; Kraatz, James M
Kennedy-King College, Chicago, Illinois
This lesson provides a diagnostic test in usage and sentence structure. Sixty-eight items cover 56 categories.
none;45 minutes;Basic, especially GED students

USING WORDS CORRECTLY (eng92i;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois
This lesson drills the student on commonly confused or misused words. Seventeen parts including such phrases as "and, etc.," "reason is because" and "irregardless." The lesson ends with a test.
none;30 minutes;Basic composition students

VERB QUIZ AND THEME REVISION SYMBOLS (poem;1976;unpublished)
Vojacek, Joe
Malcolm X College, Chicago, Illinois
This two part lesson will quiz the student on past tense and present participle and familiarize the student with the alphabetical abbreviations and editing symbols he will encounter in themes graded by the instructor.
none;40 minutes;Composition students at any college level

VERB TENSE I (tense;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson gives the student aid in recognizing additional verb tenses. The four tenses covered are past perfect, past progressive, future perfect, and future progressive.
none;60 minutes;Regular composition students

VERB TENSE II (intverb;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson is to improve student's recognition of verb tense. Index includes advanced verb tense and subjunctives. Verbs are divided into regular, irregular, auxillary or helper.
none;60 minutes;Regular composition students

WELCOME TO DANGLING PARTICIPLES (eng92n;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois
This lesson gives the student experience in recognition and correction of dangling participles and some misplaced modifiers. Ten parts include introduction to participles, exercises on dangling participles, the punctuation of introductory participial phrases, plus a final test.
none;60 minutes;Composition students

WELCOME TO PASSIVE VERBS (eng92o;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois
This lesson provides the student with an introduction to passive verbs. Eight parts include a discussion of the weak passive and how to convert the passive to the active.
none;30 minutes;Basic composition students

WELCOME TO SEMICOLONS AND MORE ABOUT COMMAS (eng92e:1974:1978)
Wallace, Sally
Parkland College, Champaign, Illinois
This lesson gives the student more understanding of and practice with semicolons and commas. Eleven parts include: a discussion of comma splice; semicolons in a series; commas in apposition; quizzes and drill of same.
none;30 minutes;Basic composition students

Composition and grammar

COMPOUND SENTENCES (WITH NOUN, PRONOUN SUBJECT) (compound1;1975;1979)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson presents compound sentences having noun and/or pronoun subjects.

none;90 minutes;regular composition students

WELCOME TO PARALLELISM (eng92s;1974;unpublished)
Wallace, Sally
Parkland College, Champaign, Illinois

This lesson deals with parallelism, those words, phrases or clauses in pairs or series, which must be of the same grammatical kind.

none;10 minutes;basic English students

Grammar

ACTIVE AND PASSIVE FORMS OF VERBS (pass;1979;unpublished)
Sweany, Joan; Stelloh, Betty
Malcolm X College, Chicago, Illinois

This lesson will help the student to learn the difference between active and passive verbs and the forms of sentences that use them, how to change sentence and its verb form from active to passive and vice versa, and when to use each form in writing.

none;40-50 minutes;first year college English students

ADJECTIVE CLAUSES (adjc;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson introduces the student to adjective clauses. Four parts include: recognition of adjective clauses; when to use who/whom/which/that; how to punctuate an adjective clause; placement of adjective clause within a sentence. Examples and quizzes are given.

none;50 minutes;Regular composition students

ADVANCED GRAMMAR REVIEW LESSONS FOR ESL STUDENTS (esl1;1976;unpublished)
Stock, Roberta
Intensive English Institute, University of Illinois

These advanced grammar review lessons provide extensive reinforcement and practice of a wide range of advanced grammatical concepts, for instance, conjunctions, future time expressions, infinitives and adjective clauses. Each of the lessons consists of at least four exercises practicing different grammatical points.

none;variable;foreign students improving their English

ADVERBIAL CLAUSE (advc;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson helps the student recognize adverbial clauses in complex sentences. Three parts include: recognition; correction; and punctuation of adverbial clause fragments. Exercises and quizzes are included.

none;25 minutes;Regular composition students

ADVERBS OF FREQUENCY (frequency;1976;unpublished)
Stock, Roberta; Frye, G. David
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

touch panel;variable;foreign students improving their English

ADVERBS OF TIME AND PLACE (timeplace;1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;none;foreign students improving their English

CAPITALIZATION II (caps2;1977;unpublished)
Gorun, Elise Spencer
Chicago Urban Skills Institute, Chicago, Illinois

This lesson introduces the student to the rules of capitalizing geographic sections, directions and addresses. The exercises given after the instruction allow the student to practice his knowledge of the rules. There is a ten question test at the end of the lesson.

none;20 minutes;Basic English students

COMMON AND PROPER NOUNS (nouns;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson will give students instruction and practice in identifying common and proper nouns.

none;25-30 minutes;Basic English students

CORRECT USAGE (usage;1978;unpublished)
Vojacek, Joe
Malcolm X College, Chicago, Illinois

This lesson has the student recognize and correct misused words of the type found in usage or diction section of handbooks. Six sets of exercises are provided. The student spots the word misused in a sentence and types in the correction, e.g., he types "an" before "hour" to replace the word "a".

dictionary;60 minutes;GED, basic, remedial, composition students

DETERMINERS (determiner;1976;unpublished)
Stock, Roberta; Frye, G. David
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;none;foreign students improving their English

DIRECT AND INDIRECT OBJECTS (do;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson provides the student with an explanation of direct and indirect objects. The lesson includes 13 sections, some dealing with the various uses of direct and indirect objects and some quizzing the student on application of these uses.

none;60 minutes;Regular composition students

DOUBLE NEGATIVES (eng92k;1974;1978)
Wallace, Sally; Kraatz, James M
Parkland College, Champaign, Illinois

This lesson gives the student an introduction to double negatives. There are thirteen sections, one of which is a refresher section on clauses. Examples of sentences are given containing negative subjects, verbs, objects and adverbs. There are also explanations of negative properties in the words "hardly", "scarcely", "barely" and "help but."

none;15 minutes;Basic English students

EMBEDDED STATEMENTS (embeds;1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none:none;foreign students improving their English

EXERCISES ON THE VERB "TO BE" (eng92p;1974;1978)
Wallace, Sally; Kraatz, James M
Parkland College, Champaign, Illinois
This lesson is to give the student practice in pronoun-verb agreement. Fifteen sentences are presented to the student. For each sentence, if the pronoun and verb do not agree, the student is to type in one correction; the corrected sentence then appears.
none;10 minutes;Basic, remedial and regular English students.

EXPRESSIONS OF COMPARISON (PART II) (compare2;1977;unpublished)
Pech, William; Banks, Fred
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
touch panel;none;foreign students improving their English

EXPRESSIONS OF COMPARISON (PART I) (compare1;1977;unpublished)
Pech, William; Banks, Fred
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
touch panel;none;foreign students improving their English

THE FORMS: VERB + "TO" + VERB; VERB + NP + "TO" + VERB (vtov;1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

GERUNDS (ger;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson provides the student with an explanation of gerunds. Thirteen parts include gerunds as subjects, past gerund phrases, gerunds as objects, gerund fragment/run-on repair and possession of the gerund.
none;60 minutes;Regular composition students

HOMONYM PUZZLE (eng4a;1977;unpublished)
Geaither, Barbara
Malcolm X College, Chicago, Illinois
This lesson reviews homonyms through the use of a crossword puzzle. Crossword puzzle provides a fun approach for reviewing there/their/they're; your/you're; its/it's; and to/too/two.
none;20 minutes;Basic or regular English students

INDIRECT OBJECTS (indirect;1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
touch panel;variable;foreign students improving their English

INFINITIVES (infit;1975;1978)
Barr, Doris
Parkland College, Champaign Illinois
This lesson introduces the student to the infinitive and its uses. Four parts include the infinitive as: a form of the verb; a subject; an object; a run-on (showing repair). Exercises and quizzes are included.
none;35 minutes;Regular composition students

AN INTRODUCTION TO SENTENCES (eng92m;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois
This lesson introduces the student to the concept of a complete sentence. Five parts include a ten question quiz requiring the student to recognize the difference between a complete and incomplete sentence. Concept of dependent clause is reviewed.
none;15 minutes;Basic English students

INTRODUCTION TO VERBS (eng92b;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois
This lesson gives the student an introduction to verbs. Ten parts are covered including person and number of verb, examples of past, future and present perfect tenses. A test on tenses ends this lesson.
none;30 minutes;Basic English students

IRREGULAR VERBS (eng92f;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois

This lesson gives the student practice in irregular verbs. Sixteen parts include the verbs "to be" and "to have" plus a review of present perfect tense and irregular verbs such as "burst," "shrink," etc. A test ends the lesson.

none;30 minutes;Basic composition students

IRREGULAR VERBS I (iregl;1975;unpublished)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson has the student recognize the principal parts of irregular verbs. Forty-three irregular verbs are presented. The student must correct the verb form in the context of the sentences provided.

none;40 minutes;Basic English students

IRREGULAR VERBS II (ireg2;1975;unpublished)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson helps the student to recognize the principal parts of irregular verbs. Thirty-eight irregular verbs are presented. The student must correct the verb form in the context of the sentences provided.

none;40 minutes;Basic English students

IRREGULAR VERBS III (ireg3;1975;unpublished)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson helps the student recognize the principal parts of irregular verbs. Forty-two irregular verbs are presented. The student must correct the verb form in the context of the sentence provided.

none;40 minutes;Basic English students

IRREGULAR VERBS IV (ireg4;1975; unpublished)
Barr, Doris
Parkland College, Champaign, Illinois

The purpose of this lesson is to give the student practice using the correct forms of irregular verbs. This batch of irregular verbs is much harder because verbs with more than one form or verbs which are similar but have different meanings are used.

none;40 minutes;Basic English students

A LOT ABOUT PRONOUNS (eng92d;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois

The lesson provides explanations and drills to familiarize the student with pronouns. It includes a 16 part index. One quiz requires the student to identify pronouns within sentences as either subjects or objects. Another quiz presents a single word and asks the student to identify it as either a possessive or a contraction.

none;30 minutes;Basic English students

MODAL VERBS (PART II) (modal2;1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

touch panel;variable;foreign students improving their English

MODAL VERBS (PART I) (modal1;1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

touch panel;variable;foreign students improving their English

MORE TERRIFIC THINGS ABOUT VERBS (eng92g;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois

This lesson gives the student practice with irregular verbs. Eleven parts, including an explanation of transitive and intransitive verbs, plus exercises involving the use of the irregular verbs lie-lay/rise-raise/sit/set.

none;30 minutes;Basic composition students

NOUN DERIVATIVES FROM VERBS: VERB + "ER"/"OR" ENDINGS (eror;1976;unpublished)
Simkin, Merrick; Pech, William
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

touch panel;variable;foreign students improving their English

NOUNS (PART II) (esli2;1976;unpublished)
Riddle, Elizabeth; Stock, Roberta
Language Laboratory. Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

NOUNS (PART I) (esli1;1976;unpublished)
Riddle, Elizabeth; Stock, Roberta
Language Laboratory, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

THE PAST TENSE (past;1976;unpublished)
Pech, William; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

PLURAL NOUNS (engl;1977;unpublished)
Geaither, Barbara
Malcolm X College, Chicago, Illinois
This lesson helps to improve the student's spelling through presentation of rules and exercises.
none;60 minutes;Basic English students

PLURAL NOUNS (plural; 1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

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POSSESSIVE AND SUBJECTIVE PRONOUNS (pronouns;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson gives the student practice in recognizing possessive, objective and subjective pronouns. Four parts each with a quiz include: subject pronouns; object pronouns; noun-pronoun matching; either-neither.
touch panel option for tests;40-45 minutes;Basic English students

POSSESSIVE FORMS OF NOUNS (engla;1977;unpubl.)
Geaither, Barbara
Malcolm X College, Chicago, Illinois
This lesson gives the student practice in forming the possessive of singular and plural nouns. It presents explanations, examples, and practice exercises in possessive formations. The final comprehensive exercise involves a fill-in chart containing four distinct areas (singular, singular possessive, plural, and plural possessive).
none:30-60 minutes;Composition students

PREPOSITIONAL PHRASES (pph;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson helps the student recognize prepositional phrases in complete sentences. Three parts include: prepositional phrase identification; phrase fragment repair; misplaced phrases. Exercises and quizzes are included.
none;35-40 minutes;Basic English students

PRESENT PROGRESSIVE VERBS (progressiv;1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

PRESENT TENSE CONJUGATION, PART I (present;1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

PRESENT TENSE CONJUGATION, PART II (present;1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;variable;foreign students improving their English

PRONOUN AGREEMENT (lipscomb5;1974;unpublished)
Lipscomb, Delores
University of Illinois Circle Campus, Urbana, Illinois

This lesson introduces the student to agreement between pronouns and their antecedents. A review of the pronoun is followed by an explanation on pronoun agreement. Exercises, including indefinite pronouns, give the student practice in identifying singular and plural pronouns.

none;15 minutes;Composition students

THE PRONOUNS WHO AND WHOM - WHEN TO USE IN FORMAL WRITING (whowhom;1979;unpublished)
Sweany, Joan
City College of Chicago

The purpose of this lesson is to familiarize students with the correct formal use of WHO and WHOM in simple interoggative sentences and relative classic constructions. The lesson also points out the difference between formal and written usage and normal spoken usage, since usage is markedly different in the two cases.

none;40-50 minutes;1st year college English students

PROPER NOUNS (proper:1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson is divided into 2 major sections. Section one defines proper nouns. Section two consists of a final assisted quiz and a final lesson test.

none;none;College English students

PUNCTUATION DIAGNOSTIC TEST (eldp;1978;unpublished)
Magidson, Errol; Kraatz, James M
Kennedy-King College, Chicago, Illinois

This lesson provides a dignostic instrument in punctuation. Twenty-eight categories represented in 40 items include such punctuation marks as periods, exclamations, and hyphens.

none;40 minutes;Basic students, especially GED students

RECOGNIZING SENTENCES (eng2;1978;unpublished)
Geaither, Barbara
Malcolm X College, Chicago, Illinois
This lesson develops an awareness of a sentence so as to promote the writing of complete sentences. The exercises involve recognition of complete sentences.
none;50 minutes;Basic English students

RELATIVE CLAUSES (relative;1976;unpublished)
Frye, G. David; Stock, Roberta
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

SUBJECT. VERB. COMPLEMENT (wordstorl:1974;unpublished)
Sweany, Joan; Yamada, Mitsuru
Malcolm X College, Chicago, Illinois
This lesson helps student to recognize simple subject, verb, and simple complement. Four parts contain ten sentences each. The student must identify specific parts of the sentence.
none;45 minutes;Basic and regular English students

SUBJECTS AND PREDICATES (subp:1975;1978)
Barr. Doris
Parkland College, Champaign, Illinois
This lesson gives the student practice in recognizing subjects and predicates within sentences. Five parts include: subject and predicate recognition, plural subjects, multiple subjects, package subjects, expletives. Exercises and quizzes included.
none;50 minutes;Basic English students

SUBJECT-VERB AGREEMENT I (sval;1974;unpublished)
Magidson, Errol
Kennedy-King College, Chicago, Illinois
This lesson is to help the student learn how to apply the rules of subject-verb agreement. The seven part index includes regular verb agreement; irregular verb agreement; subjects joined by "and", "either-or," etc.
none;60 minutes;Basic students, especially GED

SUBJECT-VERB AGREEMENT II (sva2;1974;unpublished)
Magidson, Errol
Kennedy-King College, Chicago, Illinois

This lesson is to help student learn how to apply the rules of subject-verb agreement. Index includes agreement problems with collective nouns, with subjects following here or there, etc. An optional short quiz is presented first for general screening purposes.

none;45 minutes;Basic, especially GED students

SUBJUNCTIVE (subjunct;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson introduces the student to the subjunctive mood. The two basic sections are: present and past (each is further sub-divided).

none;40 minutes;Regular composition students

A TEST ON HARD VERBS (eng92h:1974:1978)
Wallace. Sally; Kraatz, James M
Parkland College, Champaign, Illinois

This lesson provides a test on hard and confusing verbs. The student has ten minutes to complete the test and can review and revise the answers before being graded. Score and correct answers are shown at the end of the test.

none;10 minutes;Basic English students

TINY TEST ON GRAMMAR AND USAGE (eng92j;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois

This lesson provides a test on grammar and usage. Six sections cover nouns, verbs, complete and incomplete sentences, why sentences are incomplete, and irregular verbs.

none;30 minutes;Basic composition students

TROUBLESOME HOMONYMS (eng4;1977;unpublished)
Geaither. Barbara
Malcolm X College. Chicago, Illinois

This lesson provides student with explanation and practice in understanding troublesome homonyms. Four sets of homonyms (its/it's; their/there/they're; your/you're; to/too/two) are presented, each with explanation, examples, practice sentences, and exercises. A final test covers all four homonym sets.

none;35 minutes;Basic English students

TWO-WORD VERBS (twoword;1976;unpublished)
Pech, William; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
touch panel;variable;foreign students improving their English

USAGE DIAGNOSTIC TEST (eldu;1974;unpublished)
Magidson, Errol; Kraatz, James M
Kennedy-King College, Chicago, Illinois
This lesson provides a diagnostic test in usage and sentence structure. Sixty-eight items cover 56 categories.
none;45 minutes;Basic, especially GED students

USAGE OF "BE + GOING TO" (begoing;1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

USAGE OF "SOME" AND "ANY" (someany;1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none:variable:foreign students improving their English

USE OF "VERY", "TOO" AND "ENOUGH" (verytoo;1977;unpublished)
Pech, William; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
touch panel;variable;foreign students improving their English

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USE OF THE PRONOUN "ONE" (esl12;1976;unpublished)
Frye, G. David; Pech, William
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none:none:foreign students improving their English

THE VERB "TO BE" (be;1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Ill.
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

VERB QUIZ AND THEME REVISION SYMBOLS (poem;1976;unpublished)
Vojacek, Joe
Malcolm X College, Chicago, Illinois
This two part lesson will quiz the student on past tense and present participle and familiarize the student with the alphabetical abbreviations and editing symbols he will encounter in themes graded by the instructor.
none;40 minutes;Composition students at any college level

VERB TENSE I (tense;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson gives the student aid in recognizing additional verb tenses. The four tenses covered are past perfect, past progressive, future perfect, and future progressive.
none;60 minutes;Regular composition students

VERB TENSE II (intverb;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson is to improve student's recognition of verb tense. Index includes advanced verb tense and subjunctives. Verbs are divided into regular, irregular, auxillary or helper.
none;60 minutes;Regular composition students

VERBS AND VERB PHRASES (wordstor2;1974;unpublished)
Sweany, Joan; Yamada, Mitsuru
Malcolm X College, Chicago, Illinois

This lesson helps the student to recognize verbs and verb phrases within a sentence. Seven activities each contain fifteen sentences. The student must identify and type the main verb (or verb phrase), move the arrow to locate the synonymous verb from list of ten, and type the correct form of this synonymous verb.

none;60 minutes;Basic and regular English students

WELCOME TO BASIC PUNCTUATION, PERIODS, AND A LOT ABOUT COMMAS (eng92c:1974:1978)
Wallace. Sally
Parkland College, Champaign, Illinois

This lesson introduces the student to commas and periods. Nine parts include use of commas in a series and review of dependent clause. The lesson ends with a test.

none;30 minutes;Basic English students

WELCOME TO COPULATIVE VERBS (eng921;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois

This lesson gives the student an introduction to copulative verbs and examples of copulative verbs serving as a bridge between subjects and information about the subject. Seven practice sentences are provided in which the student must correctly identify the verb as copulative or active.

none;10 minutes;Basic English students

WELCOME TO DANGLING PARTICIPLES (eng92n:1974:1978)
Wallace. Sally
Parkland College, Champaign, Illinois

This lesson gives the student experience in recognition and correction of dangling participles and some misplaced modifiers. Ten parts include introduction to participles, exercises on dangling participles, the punctuation of introductory participipial phrases, plus a final test.

none:60 minutes:Composition students

WELCOME TO PARTS OF SPEECH (eng92;1976;1978)
Wallace, Sally
Parkland College, Chicago, Illinois

The purpose of this lesson is to give the student a short review of parts of speech. Thirteen sections cover parts of speech (nouns, pronouns, adjectives, articles, verbs, adverbs, prepositions, conjunctions, exclamations). The lesson ends with a test.

none;40 minutes;Basic English students

WELCOME TO PASSIVE VERBS (eng92o;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois
This lesson provides the student with an introduction to passive verbs. Eight parts include a discussion of the weak passive and how to convert the passive to the active.
none:30 minutes:Basic composition students

WELCOME TO SEMICOLONS AND MORE ABOUT COMMAS (eng92e;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois
This lesson gives the student more understanding of and practice with semicolons and commas. Eleven parts include: a discussion of comma splice; semicolons in a series; commas in apposition; quizzes and drill of same.
none;30 minutes;Basic composition students

WELCOME TO SINGULARS, PLURALS AND POSSESSIVES (eng92a;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois
This lesson gives the students practice with singulars, plurals, and possessives. Thirteen parts include introduction to possessives, formation of plural possessives and unusual plurals like oxen and geese.
none;30 minutes;Basic English students

"WH"- QUESTION WORDS (whquestion;1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

Orthography and spelling

CONSONANT SYMBOLS (sound2;1976,1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois
This lesson acquaints the student with the consonant symbols used in the dictionary pronunciation guide.
none;30 minutes;First year college English students

PLURAL NOUNS (engl;1977;unpublished)
Geaither, Barbara
Malcolm X College, Chicago, Illinois
This lesson helps to improve the student's spelling through presentation of rules and exercises.
none;60 minutes;Basic English students

SPELLING "C" WORDS (sound1;1975,1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois
The lesson introduces the student to the relationship of sound to spelling in "c" words. The student must recognize the "c" sound of words with vowels following the "c" and with consonants following the "c."
none;25 minutes;Basic English students

SPELLING CORRECTIONS (spl;1974;unpublished)
Prince, Richard; Yamada, Mitsuru
Malcolm X College, Chicago, Illinois
This lesson trains the student to recognize and correct commonly misspelled words. One hundred fifty misspelled words are presented.
none;120 minutes;Students with spelling problems

SPELLING DIAGNOSTIC TEST (elds:1974;unpublished)
Magidson, Errol; Kraatz, James M
Kennedy-King College, Chicago, Illinois
This lesson provides a diagnostic test in spelling. Thirty-eight items from 27 categories cover the basic spelling rules.
none;40 minutes;Basic, especially GED students

SPELLING DRILL (spell;1974;unpublished)
Magidson, Errol; Yamada, Mitsuru
Kennedy-King and Malcolm X College, Chicago, Ill.
This lesson improves student's spelling through drill. Seven lists are provided; each list represents a different spelling rule (ie rules, doubling final consonants, etc.).
none;90 minutes;Students with spelling problems

SPELLING LESSONS - HIGH-LEVEL (hilevel1;1975;unpublished)
Intensive English Institute
Div. of English as a Second Language, Univ. of Ill.
The spelling lessons designed for use by students studying English as a Second Language provide a drill of high-frequency hard-to-spell words. The series "hilevel1" through "hilevel14" are high-level lessons. In each lesson, errors are anticipated and hints to the correct spelling are given. Words are seen. heard from the audio device, typed and judged.
audio device;variable;foreign students improving English

SPELLING LESSONS - LOW-LEVEL (spelling1;1975;unpublished)
Intensive English Institute
Div. of English as a Second Language, Univ. of Ill.

The spelling lessons designed for use by students studying English as a Second Language provide a drill of high-frequency hard-to-spell words. The series "spelling1" through "spelling14" are low-level lessons. In each lesson, errors are anticipated and hints to the correct spelling are given. Words are seen, heard from the audio device, typed and judged.

audio device;variable;foreign students improving English

SYLLABICATION AND ACCENTING (sound3;1976, 1979:unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois

This lesson aquaints the student with the vowel symbols, syllable division and accentuation used in a dictionary pronunciation guide. The lesson first introduces the symbols for twenty vowel and dipthong sounds. Then syllables are defined and accents are explained. Exercises are included for student practice.

none;35 minutes;First year college English students

Pronunciation

CONSONANT SYMBOLS (sound2;1976,1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois

This lesson acquaints the student with the consonant symbols used in the dictionary pronunciation guide.

none;30 minutes;First year college English students

SPELLING "C" WORDS (sound1;1975,1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois

The lesson introduces the student to the relationship of sound to spelling in "c" words. The student must recognize the "c" sound of words with vowels following the "c" and with consonants following the "c."

none;25 minutes;Basic English students

SYLLABICATION AND ACCENTING (sound3;1976, 1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois

This lesson aquaints the student with the vowel symbols, syllable division and accentuation used in a dictionary pronunciation guide. The lesson first introduces the symbols for twenty vowel and dipthong sounds. Then syllables are defined and accents are explained. Exercises are included for student practice.

none;35 minutes;First year college English students

Punctuation

COMMAS WITH NONRESTRICTIVES I (cain01r;1977;unpublished)
Cain, Betty
Kennedy-King College, Chicago, Illinois

This lesson illustrates the use of the comma in nonrestrictive elements. The five-part lesson includes sections on two basic comma rules, recognizing nonrestrictive elements, and making decisions on comma usage. Examples and exercises accompany each section.

none;20 minutes;Composition students

COMMAS WITH NONRESTRICTIVES II (cain02r;1977;unpublished)
Cain, Betty
Kennedy-King College, Chicago, Illinois

This lesson illustrates the proper use of commas with restrictive and nonrestrictive elements. Explanations and exercises are presented on comma usage in restrictive and nonrestrictive elements and the final section asks for the student's opinion on using commas in seven "open-ended" sentences.

none;20 minutes;Composition students

DIRECT AND INDIRECT QUOTATIONS (thompson3;1976;unpublished)
Thompson, Marguerite
Wright College, Chicago, Illinois

This lesson provides an explanation of direct and indirect quotations and is accompanied by ten exercises. The majority of the lesson is script.

none;15 minutes;Composition students

DIRECT QUOTATIONS I (thompson1;1976;unpublished)
Thompson, Marguerite
Wright College, Chicago, Illinois

This lesson gives the student an introduction to simple and interrupted quotations. Examples and explanations are provided to introduce the student to simple and interrupted quotations.

none;15 minutes;Composition students

DIRECT QUOTATIONS II (lipscomb4;1974;unpublished)
Lipscomb, Delores
University of Illinois Circle Campus, Chicago

This lesson instructs the student in the proper use of quotation marks with direct quotations. Explanation followed by exercises and review allow the student to practice what he is learning.

none;15 minutes;Composition students

PUNCTUATION DIAGNOSTIC TEST (eldp;1978;unpublished)
Magidson, Errol; Kraatz, James M
Kennedy-King College, Chicago, Illinois
This lesson provides a dignostic instrument in punctuation. Twenty-eight categories represented in 40 items include such punctuation marks as periods, exclamations, and hyphens.
none;40 minutes;Basic students, especially GED students

QUOTATIONS I (quote1;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson introduces the student to the use of quotation marks. It includes an explanation of quotation marks with an emphasis on quotations at the end of sentences.
none;25-30 minutes;Regular composition students

QUOTATIONS II (quote2;1978;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson introduces the student to the use of quotations at the beginning of sentences. It includes a short lesson with a review followed by a quiz and a 10-sentence lesson test.
none;15 minutes;Regular composition students

QUOTATIONS III (quote3;1978;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson introduces the student to the use of quotation marks at the end of sentences. It includes examples and quizzes.
none;30 minutes;Regular composition students

QUOTATIONS IV (quote4;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson on quotations emphasizes their use in indirect questions and quoted questions. The three major divisions of the lesson are 1) direct, unquoted questions, 2) indirect questions, and 3) quoted questions.
none;30 minutes;Regular composition student

QUOTATIONS WITH CHANGING SPEAKERS (thompson2;1976;unpublished)
Thompson, Marguerite
Wright College, Chicago, Illinois
This lesson gives the student instruction in using quotations of more than one sentence and in quotations with changing speakers. Explanations and examples are provided to illustrate the proper use of quotation marks in situations where the speaker says more than one sentence.
none;30 minutes;Composition students

SEMICOLONS I (smcol;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson introduces the basic rules of the semicolon. Three parts include semicolon with five types of subjects. subject-verb sets, identification. Each part contains exercises and a quiz.

none;45 minutes;Regular composition students

SEMICOLONS II (smco2;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lessons introduces the use of semicolons with adverbs. Exercises and quizzes with emphasis on using semicolons with the adverbs: nevertheless; consequently; subsequently; thus; however; therefore.

none;30 minutes;Regular English students

SEMICOLONS III (smco3;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois

This lesson introduces the student to placement and punctuation of adverbs in sentences. It includes adverbs at the beginning. middle and end of sentences. There are quizzes for each part plus a final test covering all three sections.

none;15-20 minutes;Regular composition students

WELCOME TO BASIC PUNCTUATION, PERIODS, AND A LOT ABOUT COMMAS (eng92c;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois

This lesson introduces the student to commas and periods. Nine parts include use of commas in a series and review of dependent clause. The lesson ends with a test.

none;30 minutes;Basic English students

WELCOME TO SEMICOLONS AND MORE ABOUT COMMAS (eng92e;1974;1978)
Wallace, Sally
Parkland College, Champaign, Illinois

This lesson gives the student more understanding of and practice with semicolons and commas. Eleven parts include: a discussion of comma splice; semicolons in a series; commas in apposition; quizzes and drill of same.

none;30 minutes;Basic composition students

Word formation

STRUCTURAL ANALYSIS OF WORDS (wordanal;1979;unpublished)
Sykes, Wylmarie Nicholson; Sweany, Joan
Malcolm X City College, Chicago, Illinois

This lesson is designed to introduce the PLATO student to the structural analysis of words. Emphasis is placed on knowledge of the function and meaning of a few basic root words, prefixes and suffixes. The lesson is intended to serve as a foundation for vocabulary lessons on PLATO which teach Greek and Latin root words, prefixes and suffixes.

none:open-ended:none

UI-UC CLASSICS DEPARTMENT LESSON INDEX (classics;1977,78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois

This lesson provides an index to lessons available to users interested in the study of classics and related topics. Also included are vocabulary building lessons.

optional touch panel:open-ended:students of classics

WORD POWER - ANALOGY EXERCISES (vocla;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois

Seven lessons provide exercises for vocabulary building, emphasizing the use of analogies to increase understanding of verbal relationships.

optional touch panel;50 minutes/lesson;college/university students

WORD POWER - BASIC ROOTS (voclb;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois

Fourteen vocabulary-building lessons present material on the derivation of English words from Latin (and some Greek) roots.

optional touch panel;50 minutes/lesson;college/university students

WORD POWER - INTENSIVE ROOTS (vocli;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois

Twenty lessons provide intensive practice for Latin roots and their English word families.

optional touch panel;50 minutes/lesson;college/university students

WORD POWER - SPECIAL TOPICS (vocls;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois

Three lessons present vocabulary words related to special topics, such as, numerals, anatomical terms, abbreviations, Latin phrases, and words and phrases from mythology.

optional touch panel;50 minutes for each lesson;college/university

WORD POWER - STANDARDIZED VOCABULARY EXAMS (voclt:1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
Two lessons provide examinations over the "Word Power" vocabulary building lessons. This is test number one. Test number two can be found in "voc2t".
optional touch panel;none;college/university students

WORD POWER (INDEX) (voc0:1978:1976)
Scanlan. Richard T
Classics Department, University of Illinois
This lesson contains the index and introduction to a series of 46 lessons on English vocabulary building. The lessons deal with prefixes, suffixes, word roots, and special topics.
optional touch panel;approximately 37 hours;college/university students

WORDSTUDY I-VI (voc;1977,78;unpublished)
Siegel, Martin A; Becker, Ruth R; Gilpin, Mariellen O; et al.
PLATO Corrections Project, CERL, Univ. of Ill.
These vocabulary tutorials and drills were developed for adolescent and adult students with low performance abilities. There are six parts, each part containing five lessons with two sections. Given a base word. the student is quizzed until he knows a meaning for that word. Then various forms of that base word are explored and used in used in sentences.
none;25 hours;third - eighth grade level readers

English language--Composition and exercises

RESEARCH PAPER OUTLINE (outlining;1979;unpublished)
Robles, Rob
Department of English. University of Illinois
This lesson is intended to be used in a 100-level rhetoric and composition class as part of the research paper unit. It will provide practice in connecting ideas, which is very important in organizing the material for a research paper.
none;none;rhetoric and composition students

English language--Consonants

CONSONANT SYMBOLS (sound2:1976.1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois
This lesson acquaints the student with the consonant symbols used in the dictionary pronunciation guide.
none;30 minutes;First year college English students

English language--Dictionaries

CONSONANT SYMBOLS (sound2;1976.1979:unpublished)
Sweany. Joan
Malcolm X College. Chicago, Illinois
This lesson acquaints the student with the consonant symbols used in the dictionary pronunciation guide.
none;30 minutes;First year college English students

DICTIONARY (diction;1974,77;unpublished)
Bator, Robert
Kennedy-King College, Chicago, Illinois

This lesson familiarizes and gives the student practice with use of the dictionary. Eight sections include: list of recommended dictionaries, list of common dictionary abbreviations, syllabication and stress drill, etymology hunt, pronunciation drill, sample entry words; usage levels; list of specialized dictionaries.

dictionary;40 minutes;Basic English students

SYLLABICATION AND ACCENTING (sound3;1976, 1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois

This lesson aquaints the student with the vowel symbols, syllable division and accentuation used in a dictionary pronunciation guide. The lesson first introduces the symbols for twenty vowel and dipthong sounds. Then syllables are defined and accents are explained. Exercises are included for student practice.

none;35 minutes;First year college English students

English language--Diphthongs

SYLLABICATION AND ACCENTING (sound3;1976, 1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois

This lesson aquaints the student with the vowel symbols. syllable division and accentuation used in a dictionary pronunciation guide. The lesson first introduces the symbols for twenty vowel and dipthong sounds. Then syllables are defined and accents are explained. Exercises are included for student practice.

none;35 minutes;First year college English students

English language--Homonyms

HOMONYM PUZZLE (eng4a;1977;unpublished)
Geaither, Barbara
Malcolm X College, Chicago, Illinois

This lesson reviews homonyms through the use of a crossword puzzle. Crossword puzzle provides a fun approach for reviewing there/their/they're; your/you're; its/it's; and to/too/two.

none;20 minutes;Basic or regular English students

TROUBLESOME HOMONYMS (eng4;1977;unpublished)
Geaither, Barbara
Malcolm X College, Chicago, Illinois

This lesson provides student with explanation and practice in understanding troublesome homonyms. Four sets of homonyms (its/it's; their/there/they're; your/you're; to/too/two) are presented, each with explanation, examples, practice sentences, and exercises. A final test covers all four homonym sets.

none;35 minutes;Basic English students

WORD CONFUSIONS I (lipscomb3;1974;unpublished)
Lipscomb, Delores
University of Illinois, Circle Campus, Chicago, Ill.
This lesson provides the student with information on the usage and spelling differences of several groups of words. Explanations and exercises are presented from which the student must learn how to avoid making simple errors resulting from word confusion.
none;5-10 minutes;Basic English students

WORD CONFUSIONS II (lipscomb6;1974;unpublished)
Lipscomb, Delores
University of Illinois, Circle Campus, Chicago, Ill.
This lesson provides the student with information on the usage and spelling differences of several groups of words. Confusing words covered in this lesson are: all ready/already; all right/alright; and all together/altogether. Introductory exercises and a closing exam supply practice for the student's usage of the listed words.
none;15 minutes;Basic English students

English language--Middle English, 1100-1500

INTRODUCTORY LESSON FOR CHAUCER STUDENTS (chaucer;1975;unpublished)
Hinton, Norman
Sangamon State University, Springfield, Illinois
This is a lesson in reading 14th century Middle English designed for students preparing to study Chaucer's "Canterbury Tales".
none;20 minutes;college and university students

English language--Outlines

RESEARCH PAPER OUTLINE (outlining;1979;unpublished)
Robles, Rob
Department of English, University of Illinois
This lesson is intended to be used in a 100-level rhetoric and composition class as part of the research paper unit. It will provide practice in connecting ideas, which is very important in organizing the material for a research paper.
none;none;rhetoric and composition students

English language--Phonetics

CONSONANT SYMBOLS (sound2;1976,1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois
This lesson acquaints the student with the consonant symbols used in the dictionary pronunciation guide.
none;30 minutes;First year college English students

English language--Reasoning

CATEGORY (think;1974;unpublished)
Vojacek, Joe
Chicago City-Wide Colleges, Malcolm X
The lesson is designed to make the student aware of his powers of reasoning . He is given basic instructions which he must apply in order to obtain correct answers. There are nine separate puzzles to solve.
none;30 minutes;any students of English

English language--Study and teaching--Foreign students
Dictation (Educational method)

DICTATION LESSONS, HIGH-LEVEL (hdictatel;1978;unpublished)
Pech, William; Banks, Fred
Div. of English as a Second Language, Univ. of Ill.
The dictation lessons for students of English as a Second Language are designed to reinforce the vocabulary, grammatical structures, and spelling words which the students learn in other ESL-PLATO lessons. The high-level dictation lessons include "hdictatel" - "hdictatel4". In each, the student may listen repeatedly to the complete sentences.
audio device, touch panel;variable;foreign students improving English

DICTATION LESSONS, LOW-LEVEL (dictatel;1978;unpublished)
Pech, William; Banks, Fred
Div. of English as a Second Language, Univ. of Ill.
The dictation lessons for students of English as a Second Language are designed to reinforce the vocabulary, grammatical structures, and spelling words which the students learn in other ESL-PLATO lessons. The low-level dictation lessons include "dictatel" - "dictatel4". In each, the student may listen repeatedly to the complete sentences.
audio device, touch panel;variable;foreign students improving English

Grammar

ADVANCED GRAMMAR REVIEW LESSONS FOR ESL STUDENTS (esl1;1976;unpublished)
Stock, Roberta
Intensive English Institute, University of Illinois
These advanced grammar review lessons provide extensive reinforcement and practice of a wide range of advanced grammatical concepts, for instance, conjunctions, future time expressions, infinitives and adjective clauses. Each of the lessons consists of at least four exercises practicing different grammatical points.
none;variable;foreign students improving their English

Introduction to PLATO

ENGLISH AS A SECOND LANGUAGE ON PLATO (eslnames;1976;unpublished)
ESL Project Authors
Div. of English as a Second Language, Univ. of Ill.

This program briefly describes the lessons included in the English as a Second Language package for foreign students. It is not an index from which one jumps directly to the desired lesson although the lesson names are given. The lessons are listed individually in the subject index under "English language--Study and teaching--Foreign students."

none;open-ended;teachers studying English as a Second Language

INTRODUCTION TO PLATO IN SIMPLE ENGLISH (eslhelp1;1976;unpublished)
Stock, Roberta; Eisenberg, John D
Division of English as a Second Language, U. of I.

This simple help lesson is a special lesson which has been written for foreign students using the PLATO system to study English. It explains to the student in very elementary English with simplistic explanations how to use PLATO, how to use the keyboard, how to make capital letters, how to punctuate, etc.

none;ability dependent;foreign students improving their English

Reading comprehension

READING AND COMPREHENSION LESSONS (resl1;1976;unpublished)
Pech, William; Berger, Michael
Div. of English as a Second Language, Univ. of Ill.

There are ten lessons in the Reading and Comprehension series available for students studying English as a Second Language. The lessons are "resl1" through "resl10". Each lesson consists of six or seven paragraphs to be read and then questions are to be answered on each one.

none;variable;foreign students improving their English

Remedial grammar

ADVERBS OF FREQUENCY (frequency;1976;unpublished)
Stock, Roberta; Frye, G. David
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

touch panel;variable;foreign students improving their English

ADVERBS OF TIME AND PLACE (timeplace:1976:unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;none;foreign students improving their English

DETERMINERS (determiner;1976;unpublished)
Stock, Roberta; Frye, G. David
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;none;foreign students improving their English

EMBEDDED STATEMENTS (embeds;1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;none;foreign students improving their English

EXPRESSIONS OF COMPARISON (PART II) (compare2;1977;unpublished)
Pech, William; Banks, Fred
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
touch panel;none;foreign students improving their English

EXPRESSIONS OF COMPARISON (PART I) (compare1;1977;unpublished)
Pech, William; Banks, Fred
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
touch panel;none;foreign students improving their English

THE FORMS: VERB + "TO" + VERB; VERB + NP + "TO" + VERB (vtov;1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;variable;foreign students improving their English

INDIRECT OBJECTS (indirect;1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

touch panel;variable;foreign students improving their English

MODAL VERBS (PART II) (modal2;1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

touch panel;variable;foreign students improving their English

MODAL VERBS (PART I) (modal1;1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

touch panel;variable;foreign students improving their English

NOUN DERIVATIVES FROM VERBS: VERB + "ER"/"OR" ENDINGS (eror;1976;unpublished)
Simkin, Merrick; Pech, William
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

touch panel;variable;foreign students improving their English

NOUNS (PART II) (esli2:1976;unpublished)
Riddle, Elizabeth; Stock, Roberta
Language Laboratory, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;variable;foreign students improving their English

NOUNS (PART I) (esli1;1976;unpublished)
Riddle, Elizabeth; Stock, Roberta
Language Laboratory, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;variable;foreign students improving their English

THE PAST TENSE (past;1976;unpublished)
Pech, William; Simkin, Merrick
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;variable;foreign students improving their English

PLURAL NOUNS (plural; 1976;unpublished)
Pech, William; Frye, G. David
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;variable;foreign students improving their English

PRESENT PROGRESSIVE VERBS (progressiv;1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;variable;foreign students improving their English

PRESENT TENSE CONJUGATION. PART I (present:1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

PRESENT TENSE CONJUGATION, PART II (present;1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

RELATIVE CLAUSES (relative;1976;unpublished)
Frye, G. David; Stock, Roberta
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

TWO-WORD VERBS (twoword:1976;unpublished)
Pech, William; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
touch panel;variable;foreign students improving their English

USAGE OF "BE + GOING TO" (begoing;1976;unpublished)
Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois
One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.
none;variable;foreign students improving their English

USAGE OF "SOME" AND "ANY" (someany;1976;unpublished)

Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;variable;foreign students improving their English

USE OF "VERY", "TOO" AND "ENOUGH" (verytoo:1977:unpublished)

Pech. William: Simkin. Merrick
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

touch panel;variable;foreign students improving their English

USE OF THE PRONOUN "ONE" (esl12;1976;unpublished)

Frye, G. David; Pech, William
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none:none:foreign students improving their English

THE VERB "TO BE" (be;1976;unpublished)

Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Ill.

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;variable;foreign students improving their English

"WH"- QUESTION WORDS (whquestion:1976:unpublished)

Stock, Roberta; Simkin, Merrick
Intensive English Institute, Univ. of Illinois

One of the series of remedial grammar lessons in the English as a Second Language package of lessons designed for foreign students studying at the University of Illinois. The lessons provide an intensive review of important grammatical points corresponding to those subtly written into the Vocabulary and Culture (Peter Adams) lessons.

none;variable;foreign students improving their English

Spelling

SPELLING LESSONS - HIGH-LEVEL (hilevell;1975;unpublished)
Intensive English Institute
Div. of English as a Second Language, Univ. of Ill.
The spelling lessons designed for use by students studying English as a Second Language provide a drill of high-frequency hard-to-spell words. The series "hilevell" through "hilevel14" are high-level lessons. In each lesson, errors are anticipated and hints to the correct spelling are given. Words are seen, heard from the audio device, typed and judged.
audio device;variable;foreign students improving English

SPELLING LESSONS - LOW-LEVEL (spelling1;1975;unpublished)
Intensive English Institute
Div. of English as a Second Language, Univ. of Ill.
The spelling lessons designed for use by students studying English as a Second Language provide a drill of high-frequency hard-to-spell words. The series "spelling1" through "spelling14" are low-level lessons. In each lesson, errors are anticipated and hints to the correct spelling are given. Words are seen, heard from the audio device, typed and judged.
audio device;variable;foreign students improving English

Vocabulary and culture

VOCABULARY AND CULTURE LESSONS (PETER ADAMS LESSONS) (nesl1;1976;unpublished)
Pech, William; Groupe, Alan; Banks, Fred
Division of English as a Second Language, U. of Ill.
The Vocabulary and Culture Lessons (Peter Adams Lessons) are designed to simultaneously 1) introduce the student to some basic "real-world" vocabulary, 2) acquaint the student with some important aspects of American culture, and 3) subtly check the student on certain grammatical points.

touch panel;ability dependent;foreign students improving their English

English language--Usage--Testing

CORRECT USAGE (usage;1978;unpublished)
Vojacek, Joe
Malcolm X College, Chicago, Illinois
This lesson has the student recognize and correct misused words of the type found in usage or diction section of handbooks. Six sets of exercises are provided. The student spots the word misused in a sentence and types in the correction, e.g., he types "an" before "hour" to replace the word "a".
dictionary;60 minutes;GED, basic, remedial, composition students

PROPER NOUNS (proper;1975;1978)
Barr, Doris
Parkland College, Champaign, Illinois
This lesson is divided into 2 major sections. Section one defines proper nouns. Section two consists of a final assisted quiz and a final lesson test.
none;none;College English students

USAGE DIAGNOSTIC TEST (eldu;1974;unpublished)
Magidson, Errol; Kraatz, James M
Kennedy-King College, Chicago, Illinois
This lesson provides a diagnostic test in usage and sentence structure. Sixty-eight items cover 56 categories.
none;45 minutes;Basic, especially GED students

English language--Vowels

SYLLABICATION AND ACCENTING (sound3;1976, 1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois
This lesson aquaints the student with the vowel symbols. syllable division and accentuation used in a dictionary pronunciation guide. The lesson first introduces the symbols for twenty vowel and dipthong sounds. Then syllables are defined and accents are explained. Exercises are included for student practice.
none;35 minutes;First year college English students

English literature--Middle English, 1100-1500

INTRODUCTORY LESSON FOR CHAUCER STUDENTS (chaucer;1975;unpublished)
Hinton, Norman
Sangamon State University, Springfield, Illinois
This is a lesson in reading 14th century Middle English designed for students preparing to study Chaucer's "Canterbury Tales".
none;20 minutes;college and university students

Enteritis

THE CASE OF THE SEAWATER SALAD (cruise2;1978;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson stresses the epidemiological aspects of a case of enteric infection aboard a cruise ship caused by a relatively uncommon pathogen, vibio parahemolyticus. The material is from the "Morbidity and Mortality Weekly Reports," published by the Center for Disease Control, Atlanta, Georgia The student is presented with questions throughout the lesson.
none;5-10 minutes;medical students

GASTROINTESTINAL ILLNESS ABOARD A CRUISE SHIP (cruise;1976;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson relates an outbreak of bacterial enteritis on a cruise ship in the Carribean. Emphasis is on epidemiological aspects of transmission and prevention. The material is taken from a case report in "Morbidity and Mortality Weekly Reports" published by the Center for Disease Control, Atlanta, Georgia. Questions are interspersed throughout the lesson.
none;5 minutes;medical students

Enthalpy

ENTHALPY EFFECTS (che4;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on enthalpy and heats of reactions designed for sophomore stoichiometry students in chemical engineering. There are six different problems with randomized variables. Help is available at almost any point in the lesson.
none;none;sophomore chemical engineering students

THERMODYNAMIC DIAGRAMS (BASIC) (che8;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is a lesson on reading thermodynamics diagrams designed for sophomore students in chemical engineering. There are six different problems.
touch panel;35 minutes;sophomore students of chemical engineering

ΔH LAW OF HESS (enthalpy;1976;1977)
Ghesquiere, James R
Comp.-based Educ. Res. Lab., CERL, Univ. of Ill.
This lesson discusses endothermic and exothermic chemical reactions, and teaches the student how to add equations to determine the enthalpy of a reaction.
none;37 minutes;college/university students

Entropy

BASIC THERMODYNAMICS QUIZ (mthermo2;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson contains diagnostic and problem solving sections on thermodynamics. Three diagnostic drills cover the basic concepts of free energy, entropy and electromotive potential. The problem solving section combines practical applications with sufficient help to lead the student to the correct answers.
none;45 minutes;first year medical students

Environment

see Power resources--Environmental aspects

Enzymatic analysis

ENZYME KINETICS: ALLOSTERIC CONTROL (menz4:1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson explains the structure and function of allosteric enzymes in general, and the structure and function of intercellular process, in particular.
none;25 minutes;first year medical students

ENZYME KINETICS: INTERACTIVE GRAPHICS (menz2;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
In this lesson the quantitative nature of enzyme catalyzed reactions is displayed graphically. The various parameters may be altered (i.e., substrate concentration, inhibitor concentration, Km, Vmax) and the effects on the kinetics of the reaction can be observed. Problems concerning both simple and inhibitor kinetics are presented to the student.
none;25 minutes;first year medical students

ENZYME KINETICS: INTRODUCTION (menz3;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Health Sciences, Univ. of Illinois
This lesson reviews the derivation of the Michaelis-Menton equation. It defines and explains the relationships among substrate concentration, reaction, velocity, Km and Vmax.
none;25 minutes;first year medical students

INTRODUCTION TO SERUM ENZYMES (menz6;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences. Univ. of Illinois
The lesson introduces the student to certain clinical aspects of serum enzyme levels through matching serum enzyme patterns with selected normal and pathological conditions. or listing tissues and organs which may release significant amounts of particular enzyme(s) following trauma or stress.
none;15 minutes;first year medical students

SANGER OLIGONUCLEOTIDE MAPPING (sam1;1976;1978)
Kaplan, Samuel
Department of Microbiology, University of Illinois
The lesson teaches the student the techniques of Sanger oligonucleotide mapping through a simulated laboratory exercise. The lesson is not intended to substitute for a wet laboratory experience. The exercise is self-paced."sam1" takes up digestion of RNA chains, "sam2" lforesis oligos, "sam3" questions on digestion, "sam4" chain generation.
none:2 1/2-3 hours total;college/university students

Enzyme inhibitors

EXPERIMENTS IN RESPIRATION (respir1;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson explains the dependence of mitochondrial activity and enzyme activity on temperature. The student also designs an experiment to determine optimum temperature for activity.
none;30 minutes;college/university students

Enzymes

CARBOHYDRATE METABOLISM III: GALACTOSE, FRUCTOSE, MANNOSE
(mcatsug;1976;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews glycolysis/gluconeogenesis and then covers the catabolism of the sugars, galactose, fructose, mannose, and of glycerol. For each compound there is a short textual discussion, question/answer section and a drill over names of enzymes and metabolites.
none;45 minutes;first year medical students

CARBOHYDRATE METABOLISM II: GLUCONEOGENESIS (mgluneo;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews glycolysis, compares and contrasts glycolysis and gluconeogenesis, describes the reactions unique to gluconeogenesis, drills the names of metabolites and enzymes, and provides a quiz over all.
none;55 minutes;first year medical students

CARBOHYDRATE METABOLISM IV: CONTROL OF CARBOHYD. METABOLISM
(mcarbcon;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson deals with the control processes of the glycolytic and gluconeogenic pathways. It has two sections of questions, the first covering the ways in which various allosteric modifiers affect these pathways, and the second covering the means by which the enzymes of these pathways are controlled.
optional touch panel;none;first year medical students

CARBOHYDRATE METABOLISM IV: CONTROL OF CARBOHYD. METABOLISM
(mcarbcon;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson deals with the control processes of the glycolytic and gluconeogenic pathways. It has two sections of questions, the first covering the ways in which various allosteric modifiers affect these pathways, and the second covering the means by which the enzymes of these pathways are controlled.
optional touch panel;none;first year medical students

CARBOHYDRATE METABOLISM I: GLYCOLYSIS (mglyco;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents the glycolytic pathway from glucose through pyruvate, with a drill at the end.
none;20 minutes;first year medical students

DIGESTIVE ORGANS AND THEIR FUNCTIONS (nutr2;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This second lesson in the Nutrition Series presents material about the chemical processes contributing to the breakdown and utilization of food.
none;25-30 minutes;nutrition students

ENZYME EXPERIMENTS (ph2;1978;1978)
Baillie, Robert; Hyatt, Gary
Comp.-based Educ. Res. Lab., U of I, Uraban, Ill.
The objective of this lesson is to learn what an enzyme is and how it works, and how environmental factors such as pH, temperature and enzyme and substrate concentrations affect reaction rates.
none;30 minutes;college/university students

ENZYME: CLINICAL DIAGNOSIS BY LABORATORY METHODS (enzyme;1976;unpublished)
Hain, Timothy C; Ressler, Newton
Abraham Lincoln Medical School, Univ. of Illinois
This lesson uses a game format to teach the use of enzyme assays in the diagnostic process. Scoring is based on time needed to complete a case, number and aptness of assays ordered and number of correct answers. The game can be played at four levels, ranging from student to physician. A detailed help section is provided.
optional touch panel;30 minutes;medical students

EXPERIMENTS IN RESPIRATION (respir1;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson explains the dependence of mitochondrial activity and enzyme activity on temperature. The student also designs an experiment to determine optimum temperature for activity.
none;30 minutes;college/university students

INTERMEDIARY METABOLISM: TCA CYCLE (mtca2;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson describes and summarizes many important characteristics of the Tricarboxylic Acid (Krebs) Cycle. The cycle is divided into three sections, each of which consists of a textual explanation, a quiz over the material and a drill covering the names of metabolites and enzymes.
none;40 minutes;first year medical students

RESPIRATION AND ENZYMES (respir;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the general scheme of glycolysis, Krebs cycle and electron transport. It also helps the student to understand the relationship of glycolysis to aerobic respiration.
none;45 minutes;college/university students

SANGER OLIGONUCLEOTIDE MAPPING (sam1;1976;1978)
Kaplan, Samuel
Department of Microbiology, University of Illinois
The lesson teaches the student the techniques of Sanger oligonucleotide mapping through a simulated laboratory exercise. The lesson is not intended to substitute for a wet laboratory experience. The exercise is self-paced."sam1" takes up digestion of RNA chains. "sam2" lforesis oligos. "sam3" questions on digestion, "sam4" chain generation.
none;2 1/2-3 hours total;college/university students

Epidemiology

BIOLOGIC VARIABILITY (sand2;1977;unpublished)
Hebel, Richard; Auerbach, David
School of Medicine, Univ. of Maryland, Baltimore
This lesson presents an introduction to biologic variability. Using graphs, charts and student experimentation, an understanding of this basic epidemiological concept is relayed.
optional touch panel;20 minutes;medical students

THE CASE OF THE SEAWATER SALAD (cruise2;1978;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson stresses the epidemiological aspects of a case of enteric infection aboard a cruise ship caused by a relatively uncommon pathogen, vibio parahemolyticus. The material is from the "Morbidity and Mortality Weekly Reports." published by the Center for Disease Control, Atlanta, Georgia. The student is presented with questions throughout the lesson.
none;5-10 minutes;medical students

EPIDEMIOLOGY TERMINOLOGY (epidemt;1974;1978)
Grimes, George M; Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois
The lesson is an exercise in recognizing various epidemiology terms when given a definition. On completion of the lesson the student should be able to read and study epidemiology materials with greater ease and more understanding.
touch panel (optional);30-60 minutes;students in veterinary medicine

GASTROINTESTINAL ILLNESS ABOARD A CRUISE SHIP (cruise;1976;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois

This lesson relates an outbreak of bacterial enteritis on a cruise ship in the Carribean. Emphasis is on epidemiological aspects of transmission and prevention. The material is taken from a case report in "Morbidity and Mortality Weekly Reports" published by the Center for Disease Control, Atlanta, Georgia. Questions are interspersed throughout the lesson.

none;5 minutes;medical students

GASTROINTESTINAL ILLNESS ABOARD AN AIRPLANE (plane:1976:unpublished)
Levy. Allan H
School of Basic Medical Sciences, Univ. of Illinois

This lesson relates an outbreak of staphylococcal food poisoning occurring among passengers on a commercial airliner. The material was extracted from a report originally published in "Morbidity and Mortality Weekly Reports," a report of the Center for Disease Control. Atlanta, Georgia. Questions about various aspects of food poisoning are asked in the lesson.

none;5 minutes;medical students

IMMUNIZATION AGAINST INFLUENZA IN HIGH-RISK CHILDREN (flu;1976;unpublished)
Levy, Allan H
School of Basic Medical Sciences. Univ. of Illinois

This lesson presents recommendations for vaccination of children with a high risk from contracting influenza, as specified by the American Academy of Pediatrics in the winter of 1976-77. Questions regarding the seroimmunity and antigenic characteristics of influenza are interspersed.

none:5 minutes:medical students

INCIDENCE AND PREVALENCE (sandl;1977;unpublished)
Morton, Richard; Auerbach, David
School of Medicine, Univ. of Maryland, Baltimore

This lesson provides an introduction to the basic concepts of incidence and prevalence. With extensive use of graphs, charts and interactive programming, the student is taught these basic epidemiologic concepts.

optional touch panel;20 minutes;medical students

INTRO. TO PRINCIPLES OF SCREENING FOR DISEASE (screentest;1977;unpublished)
Morton, Richard; Schuldenfrei, Jeffrey
School of Medicine, Univ. of Maryland, Baltimore

This lesson contrasts screening with diagnosis and concentrates on definitions of sensitivity and specificity. Graphic examples are shown of the reciprocal relationship between the two measures, and several numerical problems are provided. The clinical approach of false positives and negatives is integrated into the lesson.

none;none;medical students

THE MICROBIAL BASIS OF VENEREAL DISEASE (veedx;1976;unpublished)
Ehrhardt, Melvin E
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides an introduction to the identification of venereal diseases, including definitions of syphilis, gonorrhea, lymphogranuloma venereum, chancroid and Donovaniasis. Symptoms, signs, manifestations, and diagnostic tests are covered along with preventative treatment for syphilis.
optional microfiche;none;medical students

MORBIDITY SURVEY (morbsur:1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides the student access to a morbidity survey of 19 infectious diseases reported by the Communicable Disease Center. The reported cases for various years may be compared, via PLATO's graphing capabilities, on a cumulative or non-cumulative basis.
touch panel;open-ended;first year medical students

ORAL CONTRACEPTIVES AND NEOPLASIA (ocneo;1979;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the types of epidemiological studies used to investigate the possible relationships between oral contraceptive use and neoplasia. The risk factors for contracting breast, cervical, endometrial, and liver cancer are reviewed, and the results of studies relating oral contraceptive use to the aforementioned cancers are presented.
none;30 minutes;first year medical students/health science students

PENICILLIN-RESISTANT STREPTOCOCCUS PNEUMONIAE (penres;1977;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents a case from "Morbidity and Mortality Weekly Reports" centered around the isolation of a penicillin-resistant strain of S. pneumoniae from a patient with apparent immunological dysfunction. Questions dealing with related material are interspersed throughout the lesson.
none;10 minutes;medical students

TUBERCULOSIS ON AN EGG FARM IN MAINE (tbc;1977;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson, based on material in "Morbidity and Mortality Weekly" published by the Center for Disease Control, Atlanta, Georgia, presents a case of a positive TB skin test on a man refusing to be further examined. The student is asked pertinent questions throughout the lesson.
none;5-10 minutes;medical students

Epidemiology--Examinations, questions, etc.

THE CASE OF THE SEAWATER SALAD (cruise2;1978;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois

This lesson stresses the epidemiological aspects of a case of enteric infection aboard a cruise ship caused by a relatively uncommon pathogen, vibio parahemolyticus. The material is from the "Morbidity and Mortality Weekly Reports," published by the Center for Disease Control, Atlanta, Georgia. The student is presented with questions throughout the lesson.

none;5-10 minutes;medical students

GASTROINTESTINAL ILLNESS ABOARD A CRUISE SHIP (cruise;1976;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois

This lesson relates an outbreak of bacterial enteritis on a cruise ship in the Carribean. Emphasis is on epidemiological aspects of transmission and prevention. The material is taken from a case report in "Morbidity and Mortality Weekly Reports" published by the Center for Disease Control, Atlanta, Georgia. Questions are interspersed throughout the lesson.

none;5 minutes;medical students

GASTROINTESTINAL ILLNESS ABOARD AN AIRPLANE (plane;1976;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois

This lesson relates an outbreak of staphylococcal food poisoning occurring among passengers on a commercial airliner. The material was extracted from a report originally published in "Morbidity and Mortality Weekly Reports," a report of the Center for Disease Control, Atlanta, Georgia. Questions about various aspects of food poisoning are asked in the lesson.

none:5 minutes:medical students

IMMUNIZATION AGAINST INFLUENZA IN HIGH-RISK CHILDREN (flu;1976;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois

This lesson presents recommendations for vaccination of children with a high risk from contracting influenza, as specified by the American Academy of Pediatrics in the winter of 1976-77. Questions regarding the seroimmunity and antigenic characteristics of influenza are interspersed.

none;5 minutes;medical students

INCIDENCE AND PREVALENCE (sandl;1977;unpublished)
Morton, Richard; Auerbach, David
School of Medicine, Univ. of Maryland, Baltimore

This lesson provides an introduction to the basic concepts of incidence and prevalence. With extensive use of graphs, charts and interactive programming, the student is taught these basic epidemiologic concepts.

optional touch panel;20 minutes;medical students

PENICILLIN-RESISTANT STREPTOCOCCUS PNEUMONIAE (penres;1977;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois

This lesson presents a case from "Morbidity and Mortality Weekly Reports" centered around the isolation of a penicillin-resistant strain of S. pneumoniae from a patient with apparent immunological dysfunction. Questions dealing with related material are interspersed throughout the lesson.

none;10 minutes;medical students

TUBERCULOSIS ON AN EGG FARM IN MAINE (tbc;1977;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois

This lesson, based on material in "Morbidity and Mortality Weekly" published by the Center for Disease Control, Atlanta, Georgia, presents a case of a positive TB skin test on a man refusing to be further examined. The student is asked pertinent questions throughout the lesson.

none;5-10 minutes;medical students

Epidemiology--Statistical methods

BIOLOGIC VARIABILITY (sand2;1977;unpublished)
Hebel, Richard; Auerbach, David
School of Medicine, Univ. of Maryland, Baltimore

This lesson presents an introduction to biologic variability. Using graphs, charts and student experimentation, an understanding of this basic epidemiological concept is relayed.

optional touch panel;20 minutes;medical students

INCIDENCE AND PREVALENCE (sand1;1977;unpublished)
Morton, Richard; Auerbach, David
School of Medicine, Univ. of Maryland, Baltimore

This lesson provides an introduction to the basic concepts of incidence and prevalence. With extensive use of graphs, charts and interactive programming, the student is taught these basic epidemiologic concepts.

optional touch panel;20 minutes;medical students

INTRO. TO PRINCIPLES OF SCREENING FOR DISEASE (screentest;1977;unpublished)
Morton, Richard; Schuldenfrei, Jeffrey
School of Medicine, Univ. of Maryland, Baltimore

This lesson contrasts screening with diagnosis and concentrates on definitions of sensitivity and specificity. Graphic examples are shown of the reciprocal relationship between the two measures, and several numerical problems are provided. The clinical approach of false positives and negatives is integrated into the lesson.

none;none;medical students

Epithelium

HISTOLOGY - EPITHELIUM (etisl;1976;unpublished)

McCormick, R; Gaburo, K

School of Basic Medical Sciences, Univ. of Illinois

This lesson teaches beginning students the fundamentals of epithelial characteristics, identification and classification. Junctional complexes and and cell surface specializations are included. Color photomicrographs of tissues and PLATO graphics, combined with extensive interactive feedback are featured. There is a pre-test and a post-test.

microfiche;none;first year medical students

Eponyms

EPONYMS: A GAME OF SKILL FOR MEDICAL STUDENTS (eponym;1977;unpublished)

Hain, Timothy C

Abraham Lincoln Medical School, Univ. of Illinois

This lesson is designed to help the student memorize the meanings of names of diseases or syndromes. Once in the drill the user matches the top definition or name with the correct item of the 5 items following. There are 350 definitions divided into groups of 20 or less.

none;30 minutes;medical students

Equations

EQUATIONS - COMBINING AND COLLECTING LIKE TERMS (eqsimp;1976;1978)

Bailey, Keith; Lassner, David

Community College Math. Group, CERL, Univ. of Ill.

The student is led through the steps of combining and collecting like terms in an equation and ends with the rule applying to the operation after he has given the correct answer. He then tries similar problems.

none;total equation series = 3.5 hours;high school and above

GRAPHING ANY LINE IN THE FORM $y = mx + b$ (line3;1975;1978)

Lederman, Barbara

Comp.-based Educ. Res. Lab., University of Illinois

The lesson provides practice in using the slope and intercept to find the equation of a given straight line or to graph a given linear equation.

none;30 minutes;students of intermediate algebra

GRAPHING LINES IN THE FORM $ax + by + c = 0$ (line5;1976;1978)

Lederman, Barbara

Comp.-based Educ. Res. Lab., University of Illinois

This lesson enables the student to convert a linear equation in the form $ax + by + c = 0$ to the form $y = mx + b$ and thereby identify its slope and intercept and be able to graph it.

none;60 minutes;intermediate algebra students

HOW TO WRITE SOLUTIONS TO SYSTEMS OF EQUATIONS (simequla;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides direction and practice in typing in solutions to the three types of systems.
none;15 minutes;intermediate algebra students

INDEPENDENT SYSTEMS OF EQUATIONS AND NUMBERS OF SOLUTIONS (simequl;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson familiarizes the student with the geometry (graphs) of three different types of systems: independent, inconsistent, and dependent as well as the number of solutions for each type.
none;30 minutes;intermediate algebra students

INTERCEPT OF STRAIGHT LINES (line2:1976:1978)
Lederman. Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the y-intercept and provides instruction and practice in finding it from the graph of a linear equation.
none;15 minutes;intermediate algebra students

INTRODUCTION TO ALGEBRAIC METHODS OF SOLVING 2 × 2 SYSTEMS (simequ3;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides motivation for learning algebraic methods for solving systems of equations and promotes an understanding of why the methods work through the use of graphs.
none:30 minutes;intermediate algebra students

INTRODUCTION TO EQUATIONS - TRUE OR FALSE (eqintro;1976;1978)
Bailey, Keith; Lassner, David
Community College Math. Gorup, CERL, Univ. of Ill.
In this lesson the student is first taught how to determine if an equation involving numbers is true or false. Then he learns to tell if a number is a solution or not a solution of an equation involving the variable, x. The lesson ends with a quiz which must be mastered to consider the lesson finished.
none;3.5 hours for complete equation series:high school and above

INTRODUCTION TO SYSTEMS OF EQUATIONS (simequ;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illiinois
This lesson provides an introduction to systems of linear equations with emphasis on the geometric meaning of the solution to a 2 × 2 system.
none:15 minutes:intermediate algebra students

THE LINES $y = b$ AND $x = c$ (line4;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the lines $y = b$ and $x = c$ and drills the student in graphing any such equation and in finding the equation of any horizontal or vertical line.
none;30 minutes;intermediate algebra students

POINT-SLOPE FORM (line1a;1976;1978)
Lederman, Barbara; Bailey, Keith; McFadden, LaVerne; et al.
Comp.-based Educ. Res. Lab., University of Illinois
Given two points or one point and the slope, the student will be able to write an equation of the corresponding line.
none;30 minutes;intermediate algebra students

SLOPE OF A LINE (line2a;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the slope and provides instruction and practice in finding it from the graph of a linear equation.
none;30 minutes;intermediate algebra students

SOLVING 2 × 2 SYSTEMS BY GRAPHING (simequ2;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction in solving 2 × 2 linear systems by graphing.
none;30 minutes;intermediate algebra students

SOLVING 2 × 2 SYSTEMS BY SUBSTITUTION (simequ4;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and exercises in solving 2 × 2 systems of linear equations using the substitution method.
none;45 minutes;intermediate algebra students

SOLVING 2 × 2 SYSTEMS BY THE ADDITION-SUBTRACTION METHOD (simequ5;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and exercises in solving 2 × 2 systems of linear equations using the addition-subtraction method (this method is also known as the method of linear combinations).
none;45 minutes;intermediate algebra students

Equations, Quadratic

FACTORING QUADRATIC POLYNOMIALS (quad2;1976;1978)
DiBello, Louis V
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides drill practice in factoring quadratic polynomials.
none;60 minutes;intermediate algebra students

QUADRATIC EQUATIONS (quadratic;1978;unpublished)
Graph. Strard Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson presents some hard open sentences, but the student is told they are easy if he can find the two secrets.
none;10 minutes;elementary mathematics students

THE SHUTTLE PUZZLE (shuttle;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
The object of this game is to interchange black pieces with orange pieces, with all pieces ending up on opposite sides. It will later be used to derive a quadratic equation.
none:open-ended:elementary mathmatics students

SOLVING QUADRATIC EQUATIONS BY FACTORING (quad3;1976;1978)
DiBello, Louis V; Community College Math. Group
Comp.-based Educ. Res. Lab., University of Illinois
This lesson concerns the solving of quadratic equations by factoring. The student can go through a guide to drills and then is given sets of problems of four types to solve.
none;60 minutes;students of intermediate algebra

Equations, Roots of

CONTROL SYSTEMS ANALYSIS (rootlocus;1976;1979)
Beck, Howard W
Dept. of Elec. Engineering. U of I. Urbana. Ill.
The techniques used in this lesson are designed for the analysis of a basic closed loop configuration with unity feedback. The program is useful as a utility program for engineering mathematics.
none;open-ended;engineering and mathematics students

Equations (Chemistry)
see Chemical equations

Equilibrium, Chemical
see Chemical equilibrium

Equity

COST VS EQUITY (equity;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the student when and how to use the cost and equity methods of accounting for ownership in long term stock investments.
none;30 minutes;introductory accounting students

Errors, Scientific

ERROR ESTIMATES IN ARITHMETIC OPERATIONS (cb9;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois
This lesson illustrates errors in arithmetic operations. It defines types of error, gives exercises in determining the accumulated error in numbers (a+b), (a-b), (axb), (a÷b) and describes the difference between correlated and uncorrelated errors. The order of study of each type of error is optional.
none:none:anyone involved in accurate arithmetic measurements

Erythromycin

ANTIMICROBIAL CHEMOTHERAPY (shp66;1975;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson discusses the general concepts of antimicrobial chemotherapy and the currently available compounds that can be effective in the treatment of infectious diseases.
none;45-60 minutes;physicians' assistants

Escherichia coli

POPULATIONS LABORATORY USING E. COLI (pop;1974;1980)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson describes how populations grow and identifies factors affecting the growth of bacterial populations.
none;15-25 minutes;college/university students

Escherichia coli infections

GASTROINTESTINAL ILLNESS ABOARD A CRUISE SHIP (cruise;1976;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson relates an outbreak of bacterial enteritis on a cruise ship in the Carribean. Emphasis is on epidemiological aspects of transmission and prevention. The material is taken from a case report in "Morbidity and Mortality Weekly Reports" published by the Center for Disease Control, Atlanta, Georgia. Questions are interspersed throughout the lesson.
none;5 minutes;medical students

Esperanto

THE BRAVE TIN SOLDIER (LA BRAVA STANSOLDATO) (soldier;1979;unpublished)
Pogue, Michael A
University of Illinois
This lesson provides practice in reading Esperanto. Many of the words may be new, and they may be looked up by typing the new word's root in at the arrow on each page.
none;30 minutes;persons interested in the study of Esperanto

ESPERANTO LESSONS (espo10;1974;1978)
Sherwood, Judith N
Comp.-based Educ. Res. Lab., University of Illinois
This is a series of elementary lessons in the auxiliary language, Esperanto.
(espo10, 21, 22, 31, 32, 33 ...)
none;10 hours;Students of the auxiliary language, Esperanto

ESPERANTO OVERVIEW (espo0;1978;1978)
Sherwood, Bruce Arne
Computer-based Educ. Res. Lab., U of Illinois, Urbana
The lesson is the introduction to the study of the international second language, Esperanto, a constructed language. The lesson gives the reasons for studying Esperanto, a brief history of its origins, and a brief overview of the language. It is hoped that the overview will provide useful help to anyone studying Esperanto through PLATO.
none;none;persons interested in studying Esperanto through PLATO

ESPERANTO PRONUNCIATION (espodict1;1979;unpublished)
Pogue, Michael A; Sherwood, Judith N; Sherwood, Bruce Arne
University of Illinois, Urbana IL
This lesson is designed to introduce Esperanto pronunciation which is completely regular. By the end of the lesson the user should be able to pronounce any Esperanto word and write any Esperanto word after hearing, even if its meaning is unknown.
touch panel, Votrax, audio disk;open-ended;general

ESPERANTO - A SHORT DEMONSTRATION USING VOTRAX (vespo1;1978;unpublished)
Sherwood, Judith N
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson is a short introduction to Esperanto in which pictures appear on the screen and PLATO pronounces the name.
votrax speech synthesizer and touch panel;open-ended;general

ESPERANTO - THE INTERNATIONAL LANGUAGE (INDEX) (esperanto;1978;unpublished)
Sherwood, Judith N
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides an index to Esperanto lessons.
votrax, audio, touch panel;open-ended;general

PICTURE INTRODUCTION TO ESPERANTO (espol;1976;1978)
Sherwood, Judith N
Comp.-based Educ. Res. Lab., University of Illinois
This lesson is a pictoral introduction to the auxiliary language, Esperanto. A crossword puzzle is included.
none;open-ended;Students of the auxiliary language, Esperanto

THE PRINCESS AND THE PEA (LA PRINCINO KAJ LA PIZO) (princess:1979:unpublished)
Pogue, Michael A
University of Illinois
This lesson provides practice in reading Esperanto. Many of the words may be new, and they may be looked up by typing the new word's root in at the arrow on each page.
none:30 minutes:persons interested in the study of Esperanto

WELCOME TO ESPERANTO VOCABULARY DRILLS (;1979;unpublished)
Sherwood, Judith N
Comp.-based Educ. Res. Lab., University of Illinois
This lesson is a processor lesson which allows even the naive user to easily prepare vocabulary drills. A sample lesson is provided, as are nameset specifictions. To examine lesson use "espowds2".
votrax, audio disk, touch panel;open-ended;general

Esters

ESTERS OF CARBOXYLIC ACID (esters;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson is on the preparation and reactions of esters. Experiments are simulated to determine the mechanism of esterification, labeled oxygen exchange and hydrolysis.
none;28 minutes;college/university students

Ether (Anesthetics)

CNS PHARMACOLOGY: GENERAL ANESTHESIA (kumc29:1975;unpublished)
Kansas University Medical Center; Nelson, S; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson covers the general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none:10 minutes:first year medical students

Experimental design

EXPERIMENTAL TECHNIQUE (ecos;1975;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson presents the universally accepted procedure for the acquisition of scientific knowledge and analyzes the steps in the process, with conversions between English and metric measures included.
none;45 minutes;college/university students

LIFE IN A MICROCOSM (ecos2;1975;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson helps the student to evaluate hypotheses and experimental designs for their potential to yield a sound conclusion, and to interpret results of research accurately.
none;20 minutes;college/university students

Extraction (Chemistry)

LIQUID-LIQUID EXTRACTIONS (extract:1977:1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.
The lesson outlines the procedures for simple and multiple extractions. The use of acids and bases in extractions is also discussed.
none:none:college and university students of organic chemistry

Extremities, Lower

ANATOMY QUIZ: LOWER EXTREMITY (anaquiz4;1976;unpublished)
Kahn, Madelyn I; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
This lesson features five separate areas - each area presenting questions in a different format (e.g., fill in the blank and sequencing). The content includes the veins, arteries, nerves, and muscles of the lower extremity. Student's score on the quiz is presented and evaluated.
none;20 minutes;first year medical students

Extremities, Upper

BRACHIUM: CLINICAL APPLICATIONS AND DRILL (antebrl;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
In this quiz lesson, the student is asked to identify gross anatomical structures of the forearm. PLATO graphics are used as the source for questions. Bone fractures and a knife puncture are used in this practical anatomy approach.
none;15 minutes;first year medical students

BRACHIUM: STRUCTURE, IDENTIFICATION, AND DRILL (brachl;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
In this quiz lesson, the student is asked to identify gross anatomical structures of the arm. PLATO graphics are used as the source for questions. The major content area includes identification of certain parameters of muscle function (origin, insertion, innervation and action) associated with the brachium.
none;15 minutes;first year medical students

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HUMAN SKELETAL SYSTEM: PART V - SHOULDER GIRDLE (skelsys5;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This osteology lesson presents the bones of the shoulder girdle. Surfaces, borders and markings of the clavical and scapula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.
none;20 minutes;first year medical students

UPPER MEMBER ANATOMY QUIZ (umq1;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
This lesson offers the student a device to test or reinforce recall of terminology of the upper member. The contents include bony markings, vasculatures, muscles, ligaments, and innervations associated with the upper member.
microfiche;15 minutes;first year medical students

UPPER MEMBER CLINICAL APPLICATION (umclin1;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
Three problems with a clinical flavor illustrate for the student the efficacy of anatomical knowledge in medical practice: 1) consequences of severing the deep radial nerve, 2) consequences of injury to radial nerve by midshaft fracture of the humerus, and 3) consequences of brachial plexus injury by shoulder hyperdepression.
none;10 minutes;first year medical students

Extremities (Anatomy)

ANATOMY QUIZ: LOWER EXTREMITY (anaquiz4;1976;unpublished)
Kahn, Madelyn I; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
This lesson features five separate areas - each area presenting questions in a different format (e.g., fill in the blank and sequencing). The content includes the veins, arteries, nerves, and muscles of the lower extremity. Student's score on the quiz is presented and evaluated.
none;20 minutes;first year medical students

BRACHIUM: CLINICAL APPLICATIONS AND DRILL (antebr1;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
In this quiz lesson, the student is asked to identify gross anatomical structures of the forearm. PLATO graphics are used as the source for questions. Bone fractures and a knife puncture are used in this practical anatomy approach.
none;15 minutes;first year medical students

BRACHIUM: STRUCTURE, IDENTIFICATION, AND DRILL (brach1;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

In this quiz lesson, the student is asked to identify gross anatomical structures of the arm. PLATO graphics are used as the source for questions. The major content area includes identification of certain parameters of muscle function (origin, insertion, innervation and action) associated with the brachium.

none;15 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART V - SHOULDER GIRDLE (skelsys5;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the shoulder girdle. Surfaces, borders and markings of the clavical and scapula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

UPPER MEMBER ANATOMY QUIZ (umq1;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

This lesson offers the student a device to test or reinforce recall of terminology of the upper member. The contents include bony markings, vasculatures, muscles, ligaments, and innervations associated with the upper member.

microfiche:15 minutes:first year medical students

UPPER MEMBER CLINICAL APPLICATION (umclin1;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

Three problems with a clinical flavor illustrate for the student the efficacy of anatomical knowledge in medical practice: 1) consequences of severing the deep radial nerve, 2) consequences of injury to radial nerve by midshaft fracture of the humerus, and 3) consequences of brachial plexus injury by shoulder hyperdepression.

none:10 minutes:first year medical students

Eye--Anatomy

GLAUCOMA (bazzoon:1978;unpublished)
Farney, Thomas L; Lee, Tom Jer-Fu
Southern Illinois University School of Medicine

This lesson consists of eleven sections which allow the student to learn about the anatomy and physiology of glaucoma, selectively review aspects of the disease process, and assess his/her knowledge of relevant autonomic pharmacology.

none;open-ended;first year medical students

Eye--Diseases and defects

GLAUCOMA (bazzoon;1978;unpublished)
Farney, Thomas L; Lee, Tom Jer-Fu
Southern Illinois University School of Medicine
This lesson consists of eleven sections which allow the student to learn about the anatomy and physiology of glaucoma, selectively review aspects of the disease process, and assess his/her knowledge of relevant autonomic pharmacology.
none;open-ended;first year medical students

Eye--Muscles

ANATOMY QUIZ: THE HEAD (anaquiz1;1976;unpublished)
Kahn, Madelyn I; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
This lesson features six separate areas - each area presenting questions in a different format (e.g., multiple choice or sequencing). The content includes arteries and veins, nerves and plexuses, muscles and ligaments, bony markings, sinuses and eyeball muscles. Student's score on the quiz is presented and evaluated.
none;15 minutes;first year medical students

Factors (Algebra)

BINOMIAL PRODUCTS: (a+b)(a-b) (park2;1976;unpublished)
Thompson, Paul; Baillie, Robert
Community College Math Group, CERL, Univ. of Ill.
This lesson provides instruction and practice in binomial products.
none;60 minutes;high school and above

EQUAL FRACTIONS (frdrill;1976;1978)
Bailey, Keith
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides practice in writing equal fractions.
none;60 minutes;basic mathematics students

FACTORING QUADRATIC POLYNOMIALS (quad2;1976;1978)
DiBello, Louis V
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides drill practice in factoring quadratic polynomials.
none;60 minutes;intermediate algebra students

FINDING THE LEAST COMMON MULTIPLE (addfrac;1976;1978)
Bailey, Keith; Baillie, Robert; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
The lesson defines multiple of a number and gives practice in finding and listing the multiples of a number. Then it defines the least common multiple of two numbers and shows several methods for finding it -- including listing multiples of each of the numbers, and using prime factorization.
none;30 minutes;basic mathematics students

MULTIPLICATION OF BINOMIALS (quad1;1976;1978)
DiBello, Louis V; Community College Math. Group
Comp.-based Educ. Res. Lab., University of Illinois

The lesson presents a step by step sample guide to the multiplication of binomials and then presents problem drills for three types of products.

none;45 minutes ;high school and above

PRIME FACTORIZATION OF WHOLE NUMBERS (primefac;1975;1978)
Bailey, Keith
Comp.-based Educ.Res. Lab., U of I, Urbana, Ill.

This lesson shows the student how to find the prime factors of natural numbers and defines prime numbers.

none;35 minutes;elementary algebra students

SOLVING QUADRATIC EQUATIONS BY FACTORING (quad3;1976;1978)
DiBello. Louis V; Community College Math. Group
Comp.-based Educ. Res. Lab., University of Illinois

This lesson concerns the solving of quadratic equations by factoring. The student can go through a guide to drills and then is given sets of problems of four types to solve.

none:60 minutes:students of intermediate algebra

Feedback control systems

CONTROL SYSTEMS ANALYSIS (rootlocus;1976;1979)
Beck, Howard W
Dept. of Elec. Engineering, U of I, Urbana, Ill.

The techniques used in this lesson are designed for the analysis of a basic closed loop configuration with unity feedback. The program is useful as a utility program for engineering mathematics.

none;open-ended;engineering and mathematics students

Femur

HUMAN SKELETAL SYSTEM: PART III - THIGH AND LEG (skelsys3;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thigh and leg. Surfaces, borders and markings of the femur, patella, tibia and fiblua are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

Femur--Diseases

TENDER, PAINFUL EXTREMITIES (femur:1977;unpublished)
Trotter, David; Ray, Robert D; Barmada, Riad
Abraham Lincoln School of Medicine, Univ. of Illinois

This case study presents a four-year-old male with a 72-hour history of irritability, fever and dyspnea. The student must offer tentative diagnosis, gather historical, physical and lab data, diagnose and treat the problem.

microfiche;none;medical students

Ferns

PLANT LIFE CYCLES (cycles;1974;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.

This lesson constructs a diagram of a generalized plant life cycle, discusses the relationship between gametophyte and sporophyte generations and illustrates how this relationship differs throughout the plant kingdom, with special emphasis on its evolutionary significance.

microfiche;90 minutes;college/university students

Fetus, effect of drugs on the

INTRODUCTORY PHARMACOLOGY: FETAL PHARMACOLOGY (kumc7;1975;unpublished)
Kansas University Medical Center: Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson on fetal pharmacology discusses the influence of drugs on the neonate's skeletal and cardiac musculature.

none;15 minutes;first year medical students

PLACENTAL TRANSFER AND FETAL PHARMACOLOGY (mnurse7;1975;1978)
Bitzer, Maryann; Boudreaux, Martha; Bitzer, Donald
Mercy Hospital School of Nursing, Urbana, Ill.

This lesson illustrates the importance of placental transfer of drugs and disease from mother to fetus, and gives an overview of some present day findings.

none;none;nursing students

Fibula

HUMAN SKELETAL SYSTEM: PART III - THIGH AND LEG (skelsys3;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thigh and leg. Surfaces, borders and markings of the femur, patella, tibia and fibula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

Fibula--Abnormities and deformities

SWOLLEN, PALPABLE MASS IN A SEVEN-YEAR-OLD BOY (fibula:1978:unpublished)
Trotter, David; Barmada, Riad; Ray, Robert D; et al.
Abraham Lincoln School of Medicine, Univ. of Illinois

In this case study a seven-year-old male suffers from malaise, fever and intermittent pain in the right proximal leg. The boy has been complaining of pain for about two months, but the parents dismissed it as "growing pains". The student must work up the case with history, physical, lab studies, diagnosis and treatment.

microfiche;15 minutes;medical students

Finance, Public

FUNDING FORMULA HANDBOOK (formula;1979;unpublished)
Berger, Michael
Center for Advanced Study, University of Illinois

In this introduction to the use of funding formulas, the user, through the use of a prototype "calculator" facility, examines a sample CETA funding formula to see how funding for a given Illinois county can be affected by changing the formula.

touch panel;40-60 minutes;students of law, economics, political science

Financial statements

ACCOUNTS RECEIVABLE (accrec:1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.

This lesson teaches methods of handling some of the problems that occur in the area of accounts receivable: in particular, estimating uncollectable receivables, writing off uncollectable accounts, recording collections of previously written-off accounts and aging accounts receivable.

none;none;introductory accounting students

ADJUSTING ENTRIES (acprob:1978;unpublished)
McKeown, James C; Lenehen, Thomas
U of I, Urbana, Ill.; Kennedy-King Col., Chicago

This lesson familiarizes students with adjustments and gives them practice in making adjusting entries.

none:30-45 minutes:introductory accounting students

ADJUSTING ENTRIES II (stateanal;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.

This lesson provides practice in making various kinds of adjusting entries.

none:45-60 minutes:introductory accounting students

BANK RECONCILIATIONS (bankrec;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson presents problems to be worked and should be used only after a discussion or reading of material on Bank Reconciliations.
none;35-50 minutes;introductory accounting students

CHANGES IN THE BALANCE SHEET EQUATION (jbc;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson presents the Balance Sheet Equation and the effect of specific events on Balance Sheet Accounts such as Cash, Inventory, Accounts Receivable and Payable, etc.
none;25-40 minutes;introductory accounting students

CLASSIFICATION AND NORMAL BALANCES (class:1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides practice in recognizing proper accounts and making proper entries.
none;10-20 minutes;introductory accounting students

CLOSING ENTRIES (close;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson provides practice in making closing entries in both a service and a merchandising organization.
none;30-40 minutes;introductory accounting students

FUNDS FLOW (fundflow;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop the reasons for the Statement of Funds Flow, to explain what funds mean in this context, and to illustrate how the statement is constructed and how it should be interpreted.
none;45-60 minutes;introductory accounting students

FUNDS STATEMENT (fund2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the student the process of collecting and summarizing information in order to present a meaningful Funds Statement.
none;60 minutes;introductory accounting students

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GENERAL JOURNAL AND LEDGER (ledger;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accounancy, U of I, Urbana, Ill.
This lesson provides practice journalizing transactions and preparing an income statement from the resultant trial balance, and journalizing closing entries and preparing a balance sheet.
none;open-ended, depending on user's skill;introductory accounting students

INCOME STATEMENT (incst:1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the proper form and components of an income statement.
none;30-45 minutes;introductory accounting students

INVENTORY METHODS (ltinv:1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson is a brief review of inventory evaluation methods through the presentation of several problems in each section.
none:30-45 minutes:introductory accounting students

INVENTORY (PERPETUAL AND INVENTORY ERRORS) (entry3;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson clarifies the difference between perpetual and periodic inventories, illustrates the effect of errors in inventory on cost of goods sold and net income, and tests the student's understanding of the relationship between various elements in an income statement.
none:20-30 minutes:introductory accounting students

JOURNAL ENTRIES I (jbc2;1978;unpublished)
McKeown, James C
Dpertment of Accountancy, U of I, Urbana, Ill.
This lesson provides a brief review of T accounts, debits, credits and practice making journal entries in order to see how transactions effect the balance sheet account.
none;60 minutes;introductory accounting students

JOURNAL ENTRIES II (invplan;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson helps provide an understanding of the entries necessary for general journal transactions. Also discussed are some of the different types of general journal transactions encountered in a service type firm amd a merchandise firm.
none:30 minutes per section:introductory accounting students

SPECIAL JOURNALS (sj;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.

This lesson reviews various special journals and gives the students practice in classifying events using these journals.

none;5-10 minutes;introductory accounting students

TEMPORARY INVESTMENTS (tempinv;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.

This lesson teaches initial recording of temporary investments, recording revenue from temporary investments, valuation of temporary investments, disposition of temporary investments.

none;45-60 minutes;introductory accounting students

WORKSHEETS (worksheet;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.

This lesson provides the student with practice using a worksheet to summarize all accounts with non-zero balances.

none;30-45 minutes;introductory accounting students

Fiscal policy

FISCAL POLICY (macro3;1976;1978)
Paden, Donald W; Wilson, James H; Barr, Michael
Department of Economics, University of Illinois

The lesson examines five alternative fiscal policies from one of doing nothing to several which fully compensate for an assumed decline in aggregate demand. The policies are examined by means of a model which initially assumes an economy with full employment.

none;40 minutes;college/university students

FISCAL POLICY (MODEL) (tmodel;1976,77;unpublished)
Paden, Donald W; Barr, Michael
Economics Department, University of Illinois

This lesson allows the user to construct a graphic model of the economy.

touch panel;open-ended;college/university students of economics

Flagella (Microbiology)

MEDICAL PARASIT. VII: TISSUE AND LUMEN-DWELLING FLAGELLATES (flag;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciencec, Univ. of Illinois

Through a linear interrogative format, information on parasitic lumen-dwelling flagellates is presented. The morphology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment are discussed in relation to the various organisms. In addition, a diagnostic review quiz is accessible from the index.

none;35 minutes;first year medical students

Flow of funds--Accounting
FUNDS FLOW (fundflow;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
The purpose of this lesson is to develop the reasons for the Statement of Funds Flow, to explain what funds mean in this context, and to illustrate how the statement is constructed and how it should be interpreted.
none:45-60 minutes:introductory accounting students

FUNDS STATEMENT (fund2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the student the process of collecting and summarizing information in order to present a meaningful Funds Statement.
none;60 minutes;introductory accounting students

Flowers--Morphology
FLOWERING AND PHOTOPERIOD (bota;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanism of flowering in response to light.
none;30-45 minutes;college/university students

Fluorine in the body
MICROMINERALS (minmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson discusses microminerals, or those elements that are required in the human diet in amounts less than 100 mg. per day. Iron, iodine and fluorine are three of the most important.
none:25-30 minutes:nutrition students

Flying
see Aeronautics

Food
NUTRITION SERIES, GENERAL OVERVIEW (nutrl;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This is an introductory lesson in the a series of Nutrition lessons designed to provide some basic concepts in nutritional science. Digestive organs and functions, carbohydrates, lipids, proteins and energy will be discussed.
none:25-30 minutes:nutrition students

Food poisoning

THE CASE OF THE SEAWATER SALAD (cruise2;1978;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson stresses the epidemiological aspects of a case of enteric infection aboard a cruise ship caused by a relatively uncommon pathogen, vibio parahemolyticus. The material is from the "Morbidity and Mortality Weekly Reports," published by the Center for Disease Control, Atlanta, Georgia. The student is presented with questions throughout the lesson.
none;5-10 minutes;medical students

GASTROINTESTINAL ILLNESS ABOARD AN AIRPLANE (plane:1976:unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson relates an outbreak of staphylococcal food poisoning occurring among passengers on a commercial airliner. The material was extracted from a report originally published in "Morbidity and Mortality Weekly Reports," a report of the Center for Disease Control, Atlanta, Georgia. Questions about various aspects of food poisoning are asked in the lesson.
none:5 minutes:medical students

Food supply--Mathematical models

CEREAL SUPPLY AND DEMAND PROJECTION MODEL (cereal1;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Sciences Laboratory, University of Illinois
Population growth is a major factor affecting the total requirement of food. Because of this rapidly increasing population, world food supply has become a major concern. Through the use of this model lesson, projections using cereals supply and demand variables can be graphed. Variables can be changed for each projection.
none;open-ended;persons interested in populations

FOOD DEMAND AND SUPPLY PROJECTIONS MODEL (foodproj:1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using food demand and supply variables can be graphed. A list of the available regions is provided and the variables can be changed in each projection.
none;open-ended;persons interested in populations

FOOD SUPPLY MODEL (poplab:1976:unpublished)
Population Dynamics Group: Handler, Paul: Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using numerous food supply variables can be graphed. A list of available regions is provided and the variables and parameters can be changed for each projection.
none;open-ended;persons interested in populations

UNITED STATES FOOD PRODUCTION MODEL (usfood:1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using United States food production variables can be graphed. A list of the available regions is provided and variables can be changed for each projection.
none;open-ended;of general interest

Foot

THE HUMAN SKELETAL SYSTEM: PT.IV - BONES OF THE FOOT (skelsys4:1978:unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This lesson presents the osteology of the bones of the foot. Surfaces and markings of the tarsals, metatarsals and phalanges are illustrated and described. Directions for palpating the structures of these bones which are subcutaneous and readily felt in the living body are included. A post-test evaluates the learning experience.
none:30 minutes:first year medical students

Force and energy

FORCES AND FREE-BODY DIAGRAMS (cb10;1975;1977)
Bennett, Carol D
Physics Department, Univ. of Illinois, Urbana, Ill.
The lesson introduces typical forces, including tension in a string and friction between surfaces. It treats the concept of a free body and has the student isolate and analyze various kinds of subsystems for the forces.
none:70 minutes:college/university students

GRAVITATIONAL POTENTIAL ENERGY (gravpot:1978:unpublished)
Beece, Daniel
Dept. of Physics, U of I, Urbana, Ill.
The purpose of this lesson is to provide an introduction to gravitational potential energy. It assumes that the student is familiar with the concepts of force and acceleration, and the Work-Energy equation.
touch panel;none;college/university students

STORED ENERGY (work:1977:1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson treats the general work-energy equation, including thermal and other internal energies (essentially the first law of thermodynamics, but in a mechanics setting) with emphasis on how the choice of subsystem affects the form of work-energy equation.
touch panel;80 minutes;college/ university

WORK DONE BY POSITION-DEPENDENT FORCES (kanel;1975;1977)
Kane, Dennis
Physics Department, University of Illinois
The work done by position-dependent forces is presented in this lesson. The work done by step function forces is explained and illustrated. The student divides a force-distance curve into successively smaller steps to approach an integral. Applications shown include work done by a spring.
none;20 minutes;college/university students in introductory physics

WORKOUT (workout:1976;unpublished)
Sutton, David C; Sherwood, Bruce Arne
Physics Department, University of Illinois, Urbana
This elementary level classical mechanics lesson presents four different games involving work: Polevault, Steeplechase, Hammerthrow and Sabercross.
touch panel;open-ended;physics students

FORTRAN (Computer programming language)

FORTRAN DO STATEMENTS (fortdo2;1975;unpublished)
Barta, Ben-Zion; Conn, Richard L; Jones, Barbara; et al.
Computer Science Dept., Univ. of Ill., Urbana, IL
The lesson describes the FORTRAN DO statements, statements designed explicitly to facilitate programming of sequences. The statements are of a kind characteristic of most high level programming languages.
none;none;high school and college computer programming students

FORTRAN IF STATEMENTS (fortif;1975;unpublished)
Strass, Gregory; Montanelli, Richard
Computer Science Deptartment, University of Illinois
This lesson discusses the FORTRAN IF statement, covering topics such as the logical IF, the arithmetic IF and logical operators.
none;none;high school and college computer programming students

FORTRAN SUBPROGRAM EXAMPLES (fortsubex;1975;unpublished)
Leach, Sandy; Montanelli, Richard
Computer Science Dept., U. of Illinois, Urbana, IL
The lesson gives examples of FORTRAN subprograms assuming the student has a knowledge of FORTRAN function and subroutine subprograms. The lesson can be tailored by the instructor to specific student knowledge by setting a parameter.
none;none;computer science students

FORTRAN'S FORMAT STATEMENT (fortfmt;1975;unpublished)
Meller, David V
Comp.-based Educ. Res. Lab., University of Illinois
This lesson presents the FORTRAN FORMAT statement in "BITS" fashion, with outline, concepts, principles, questions and drill for each topic covered.
none;none;computer programming students

INTRODUCTION TO FORTRAN ARITHMETIC (fortarith:1975:unpublished)
Barber, Jeff; Montanelli, Richard
Department of Computer Science, Univ. of Illinois
This computer science lesson teaches various aspects of FORTRAN Arithmetic and includes a final quiz on the information.
none:none:computer science students

AN INTRODUCTION TO FORTRAN DO LOOPS (fortdo1;1976;unpublished)
Hansen, Wilfred J; Neubauer, Heidi; Struven, Terry; et al.
Computer Science Dept., Univ. of Illinois, Urbana
The lesson discusses FORTRAN DO loops and gives examples for the persons learning the FORTRAN programming language. The lesson concludes with a quiz.
none;none;college/university students

AN INTRODUCTION TO FORTRAN SUBROUTINE SUBPROGRAMS (fortsub1;1975;1978)
Slaughter, Keith; Montanelli, Richard
Comp. Sci. Dept., ACSES Project, Univ. of Ill.
The lesson on FORTRAN subroutine subprograms can be tailored to specific student knowledge by setting a parameter from the "csrouter". The lesson presents text and review exercises with options for text only, review only or both text and review exercises.
none:10-20 hours for series:college/comm. or jr. college

MULTI-DIMENSIONAL ARRAYS IN FORTRAN (fortarray2;1975;1978)
Kawell, Len; Montanelli, Richard
Comp. Sci. Dept., ACSES Project, Univ. of Ill.
The lesson teaches how to handle multi-dimensional arrays in two types of FORTRAN input/output statements: WATFOR/WATFIV format-less statements or standard FORTRAN formatted input/output statements.
none:10-20 hours for series:college/community college

ONE DIMENSIONAL FORTRAN ARRAYS (fortarray1;1975;unpublished)
Levin, Ken; Fill, Joe; Friedman, H. George; et al.
Computer Science Dept., Univ. of Illinois
The lesson on array handling in the FORTRAN programming language is geared both to students and to an instructor considering the lesson for use in a course. In the latter case, the instructor is shown how to tailor a parameter especially for his students. The lesson assumes familiarity of the students to some FORTRAN input and output statements.
none;none;college/university students

WELCOME TO FORTFMT1-A LESSON IN THE BASIC ART OF FORMATTING
(fortfmt1;1975;unpublished)
Strass, Gregory; Montanelli, Richard
Computer Science Dept., University of Illinois
This lesson teaches the user the output controls for a FORTRAN program using the PRINT, WRITE and FORMAT statements.
none;none;computer programming students

WELCOME TO FORTSAMPLE (fortsample;1976;1978)
Groupe, Alan; Simkin, Merrick
Department of Computer Science, U of I, Urbana, Ill.
This lesson is an introduction to computer programming using the FORTRAN language.
none;none;beginning Computer Science students

Fourier series

USE OF FOURIER SERIES (ph108e:1976:1978)
Bennett, Carol D
Physics Department, University of Illinois
The program is one to illustrate and give practice to the student in the use of Fourier series. Both Fourier analysis and Fourier synthesis techniques are given. The HELP display contains sections on sample functions, special symbols, Boolean values and advice on how to enter points.
none;open-ended;university students with math. background

Fractions, Decimal

DECIMAL DARTS, PARTS 1 AND 2 (ddarts;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Elem. Math. Group, CERL
Two lessons on decimal fractions are included here as well as a checkup reviewing the material covered in Part 1. The first lesson introduces decimal names for tenths and hundredths; the second, decimal names for thousandths. Both lessons offer practice using the names to locate points on the number line.
none:lessons: open-ended; checkup: 3-5 minutes;basic math. students

DECIMAL NAMES FOR FRACTIONS (con;1975;1977)
Dugdale, Sharon: Kibbey, David: Leung, Helen
U of I NSF Elem. Math. Group, CERL
The lesson offers the student practice writing decimal names for tenths, hundredths and thousandths.
none;20-30 minutes;students of basic mathematics

DECIMAL PINBALL (pind:1975:1978)
Dugdale, Sharon: Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice converting common fractions and mixed numbers to decimal numbers. There is a time limit on each problem presented to the student. The lesson shows a list of record scores.
none;open-ended;students of basic mathematics

FRACTION NAMES FOR DECIMAL NUMBERS (con:1976:unpublished)
Dugdale. Sharon: Kibbey. David: Leung. Helen
U of I NSF Fractions Elem. Math. Group, CERL
The student is given practice writing common fraction and mixed number names for numbers expressed as decimals. There is a checkup included on decimal and fraction conversions at the end of the lesson to review the material covered in the lessons: "Decimal Names for Fractions" and "Fraction Names for Decimal Numbers".
none:lesson: 20-30 minutes, checkup: 3-5 minutes:students of basic math

OBSTACLE COURSE (obs;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is in game format and provides experience with the addition and subtraction of decimals.
none;open-ended;students of basic mathematics

SORT NUMBER NAMES WITH DECIMALS (sortd:1975:1978)
Dugdale, Sharon: Kibbey, David: Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives practice identifying equivalent whole numbers, fractions, mixed numbers and decimal numbers.
none:open-ended:students of basic mathematics

Fractions (Mathematics, Basic)

ADDITION AND SUBTRACTING WITH SIMPLIFYING AND BORROWING (pad2;1975;1978)
Dugdale, Sharon: Kibbey, David: Cohen, Barry: et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience adding and subtracting fractions and mixed numbers, simplifying answers and "borrowing" when necessary. A checkup on the material in this lesson is included.
none;lesson: 20-30 minutes, checkup: 5-10 minutes;basic math. students

ADDITION AND SUBTRACTION DRILL: LIKE AND UNLIKE DENOM. (trvad:1975:1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives practice in adding and subtracting fractions and mixed numbers with like and unlike denominators. The lesson is intended for students who have a basic understanding, but who need practice.
none;part 1: 30-60 minutes, part2: 1-1/2 hours:students of basic math

ADDITION AND SUBTRACTION OF MIXED NUMBERS WITH LIKE DENOM. (pad1;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the subject of addition and subtraction of fractions and mixed numbers with like denominators.
touch panel;20-30 minutes;students of basic mathematics

ADDITION AND SUBTRACTION PRACTICE WITH EQUIVALENCE SETS (slad2;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience adding and subtracting fractions and mixed numbers, using a systematic method to find a common denominator.
touch panel;10-20 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM, PART 3: PRACTICE (hs3p4;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives the student experience using the problem-solving approach to addition and subtraction of fractions with unlike denominators.
none;15-30 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: PART 1 (hs1;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the addition of fractions and mixed numbers with unlike denominators. It also introduces an approach to problem-solving.
none;5-10 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: PART 2 (hs2;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math Group, CERL
The lesson gives the student a more detailed look at the problem-solving approach to addition of fractions with unlike denominators.
none;5-10 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: PART 3 (hs3;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson shows addition of coins as a familiar process which is similar to addition of fractions with unlike denominators. It reinforces the problem-solving approach to addition of fractions with unlike denominators.
none;5-10 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: PART 4 (hs3p4;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson reviews the problem-solving strategy for addition and subtraction of fractions with unlike denominators. This approach is applied to problems in which neither of the given denominators can be used for the common denominators (i.e. neither denominator divides the other evenly).
none;5-10 minutes;students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: PART 4B (hs4p:1975:1978)
Dugdale. Sharon: Kibbey. David: Leung. Helen
U of I NSF Fractions Elem. Math. Group. CERL
The lesson gives practice in adding and subtracting fractions with unlike denominators. The lesson suggests a common denominator.
none:15-30 minutes:students of basic mathematics

ADDITION BY USING AN EASIER PROBLEM: REVIEW (hsrev; 1975;1978)
Dugdale, Sharon; Kibbey, David; Leung. Helen
U of I NSF Fractions Elem. Math. Group. CERL
The lesson summarizes and reviews the strategy for adding and subtracting fractions with unlike denominators.
none;10-20 minutes;students of basic mathematics

ADDITION PRACTICE. SIMPLIFYING ANSWERS (padl:1975:1975)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience adding fractions and mixed numbers with like denominators. simplifying answers when necessary.
none;20-30 minutes;students of basic mathematics

ADDITION WITH EQUIVALENCE SETS (slad:1975:1978)
Dugdale. Sharon: Kibbey. David: Leung. Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson suggests a method for finding a common denomator.
touch panel;10-15 minutes;students of basic mathematics

BOXES: EQUIVALENT FRACTIONS (receqa:1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces a method for constructing fractions equivalent to a given fraction.
none:open-ended;students of basic mathematics

BOXES: EQUIVALENT FRACTIONS PRACTICE (receqb;1975;1978)
Dugdale. Sharon: Kibbey. David: Bereiter. Marilyn
U of I NSF Fractions Elem. Math. Group. CERL
The lesson offers practice in naming equivalent fractions with a familiar model available for help. The file contains not only the lesson but a checkup sequence.
touch panel:open-ended lesson, checkup: 3-5 minutes;students of basic math

BOXES: HOW MUCH IS PAINTED? (recask;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson helps the student develop a strategy for figuring out what fraction of a box is painted. This skill is useful for addition of fractions using painted areas of a box.
touch panel;open-ended;students of basic mathematics

BOXES: NAME EQUIVALENT FRACTIONS (recnams;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson offers practice naming equivalent fractions with visual feedback comparing all of the named fractions.
touch panel;open-ended;students of basic mathematics

CHECKUP: ADDITION AND SUBTRACTION WITH UNLIKE DENOMINATORS (strad;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is a short checkup covering addition and subtraction of mixed numbers with unlike denominators. The student is able to list equivalence sets for the fractions involved in each problem if he or she chooses.
touch panel;5-10 minutes;students of basic mathematics

CHECKUP: CUT AND PAINT (recchk;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is a short checkup reviewing the material covered in the lesson, "Cut and Paint".
touch panel;5-10 minutes;students of basic mathematics

CHECKUP: MIXED NUMBERS WITH PIZZA (pmix;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I Fractions Elem. Math. Group, CERL
This lesson is a short checkup reviewing the material covered in lesson, "Pizza: Mixed Numbers Introduction".
touch panel;3-5 minutes;students in basic mathematics

CHECKUP: PIZZA FRACTIONS (pchk;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is a short checkup reviewing the material in lesson "Pizza: Fractions".
touch panel;5-10 minutes;students of basic mathematics

CUT AND PAINT (rec;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson lets the student construct fractions of a region by "painting" parts of rectangular boxes. It also involves numerators greater than 1.
touch panel:open-ended:students of basic mathematics

DARTS (darts:1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry
U of I NSF Elem. Math. Group, CERL
The lesson is one in the group of Fractions Curriculum lessons which teaches "mixed numbers and fractions ≥ 1". It gives the student experience in locating fractions and mixed numbers on the number line. The lesson also includes a checkup to determine whether the student is ready for further number line work.
none;lesson: open-ended, checkup: 3-5 minutes;basic math. students

DECIMAL DARTS, PARTS 1 AND 2 (ddarts:1975:1978)
Dugdale. Sharon: Kibbey. David: Leung. Helen
U of I NSF Elem. Math. Group, CERL
Two lessons on decimal fractions are included here as well as a checkup reviewing the material covered in Part 1. The first lesson introduces decimal names for tenths and hundredths; the second, decimal names for thousandths. Both lessons offer practice using the names to locate points on the number line.
none:lessons: open-ended; checkup: 3-5 minutes;basic math. students

DECIMAL NAMES FOR FRACTIONS (con;1975;1977)
Dugdale, Sharon; Kibbey. David: Leung. Helen
U of I NSF Elem. Math. Group. CERL
The lesson offers the student practice writing decimal names for tenths, hundredths and thousandths.
none;20-30 minutes:students of basic mathematics

EQUIVALENCE EXPERIENCE (stermsx:1975:1978)
Dugdale. Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson encourages the student to think about the reason for finding the simplest terms name for a fraction by dividing out the common factors of the numerator and denominator. It also gives the student a chance to experiment with factors and divisibility related to equivalent fractions using PLATO to do the computations.
touch panel;open-ended;students of basic mathematics

EQUIVALENT FRACTIONS GENERALIZED (egen:1975:1977)
Dugdale. Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson presents a systematic method for finding fractions equivalent to a given fraction. It also gives practice in naming an equivalence set in order, starting with simplest terms. The latter skill is useful for systematically finding a common denominator for addition and subtraction of fractions. The file contains the lesson and a checkup.
none;lesson: open-ended, checkup: 5-10 minutes:students in basic math.

FRACTION NAMES FOR DECIMAL NUMBERS (con:1976;unpublished)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The student is given practice writing common fraction and mixed number names for numbers expressed as decimals. There is a checkup included on decimal and fraction conversions at the end of the lesson to review the material covered in the lessons: "Decimal Names for Fractions" and "Fraction Names for Decimal Numbers".
none;lesson: 20-30 minutes, checkup: 3-5 minutes:students of basic math.

FRACTION NOTATION (fnotation;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces 1/4 as a short way to write one fourth. It teaches the student to write 1/4 on PLATO.
none;2-5 minutes;students of basic mathematics

FRACTIONS AND MIXED NUMBERS (tryeq:1975:1978)
Dugdale. Sharon: Kibbey. David: Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice converting fractions to mixed numbers and vice versa. It is for students who have a basic understanding, but who need practice.
none;15-20 minutes;basic math. students

FRACTIONS BASKETBALL (drib;1975;1977)
Dugdale, Sharon; Kibbey, David; Cohen, Barry; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson offers subtraction practice on the number line. The form is that of a game for one or two students. Given ball and basket positions on the number line, the students bounce the ball some fraction or mixed number to make a basket. The game can be played with numbers with like or unlike denominators. Difficulty adjusts to performance.
none;open-ended;students of basic mathematics

HIGH WIRE (monkey;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson presents the addition of fractions on the number line with visual feedback about common denominators.
none:open-ended:students of basic mathematics

INEQUALITIES WITH LIKE DENOMINATORS (ineq;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson prepares the student for comparing fractions with unlike denominators.
none;5-10 minutes;basic math. students

INEQUALITIES WITH UNLIKE DENOMINATORS (ineq:1975:1978)
Dugdale, Sharon: Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The file contains the lesson on comparing fractions with unlike denominators and also contains a checkup to see whether the student has mastered this material. The lesson develops a systematic method for comparing the size of 2 fractions with unlike denominators.
touch panel:lesson: 10-20 minutes, checkup: 3-5 minutes;students of basic math

INTRODUCTION TO MULTIPLYING MIXED NUMBERS (fmint:1976:1978)
Dugdale, Sharon: Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the multiplication of mixed numbers using a familiar multiplication model. The student writes multiplication number sentences to describe arrays of boxes. Difficulty adjusts to the student's performance.
none:open-ended:students of basic mathematics

LIGHTS (lites;1975;1978)
Dugdale, Sharon; Kibbey, David; Lamprinos, Susan Frasier; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is one in the group of Fractions Curriculum lessons which teaches the "meaning of fractions". It offers the student practice in constructing and identifying fractions of a set of objects. The touch panel is used to turn on fractions of a set of light bulbs. After some success, PLATO turns on lights and the student identifies the fraction on.
touch panel;lesson: 5-15 minutes, checkup; 2-5 minutes;students of basic math

LIGHTS: EQUIVALENT FRACTIONS (liteseq; 1975;1978)
Dugdale, Sharon: Kibbey, David: Lamprinos, Susan Frasier: et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is one in the group of Fractions Curriculum lessons which teaches the "meaning of fractions". It introduces the student to the concept of equivalent fractions using a set of objects. The touch panel is used in this lesson.
touch panel:10-20 minutes:students of basic mathematics

MAKE-A-MONSTER (monster;1975;1978)

Dugdale, Sharon; Kibbey, David; Cohen, Barry; et al.

U of I NSF Fractions Elem. Math. Group. CERL

The lesson is in three parts. The first part re-emphasizes that 3/4 is 3 of a fourth and provides an experience with a new unit -- the cup. It also serves to familiarize the student with a model also useful for equivalent fractions found in part 2 of the lesson and common denominators explored in part 3.

touch panel;open-ended:students of basic mathematics

MIXED NUMBER MULTIPLICATION PRACTICE (fmdrill;1976;1978)

Dugdale, Sharon; Kibbey, David; Leung, Helen

U of I NSF Fractions Elem. Math. Group. CERL

The lesson gives practice in multiplying mixed numbers. There is also a checkup included in the same file with the lesson.

none;lesson: 30-60 minutes. checkup: 5-10 minutes:students of basic math

MIXED NUMBER NOTATION (nlintrob;1975;1978)

Dugdale, Sharon; Kibbey, David; Layman, Tom

U of I NSF Fractions Elem. Math. Group. CERL

The lesson shows the student how to write mixed numbers on PLATO. It uses the number line for illustration.

none;open-ended;students of basic mathematics

MULTIPLICATION OF FRACTIONS (fmult:1976:1978)

Dugdale. Sharon; Kibbey, David; Leung, Helen

U of I NSF Fractions Elem. Math. Group, CERL

The lesson begins the subject of multiplication of fractions. using a familar multiplication model. It also introduces an algorithm for multiplication of fractions.

none;open-ended;students of basic mathematics

MULTIPLICATION PRACTICE, WITH PICTURES FOR HELP (fmpix;1976;1978)

Dugdale, Sharon; Kibbey, David; Leung, Helen

U of I NSF Fractions Elem. Math. Group. CERL

The lesson offers practice in multiplication of mixed numbers, with a familiar model available as the student needs it.

none;open-ended;students of basic mathematics

NEW ANSWER FORMAT (naf:1975:1978)

Dugdale. Sharon; Kibbey, David; Layman, Tom

U of I NSF Fractions Elem. Math. Group, CERL

The lesson introduces a new way that a student's answer will look when she or he writes a fraction or mixed number on PLATO.

none;open-ended;students of basic mathematics

PAINT ADDITION (recad;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group
The lesson consists of three parts and a checkup. The first two parts, "PLATO Paints" and "You Paint", teach the addition of fractions with unlike denominators. The third part, "Your Choice", encourages the student to make up her or his own fraction addition problems and try painting problems in different ways. The checkup reviews the material.
touch panel;lesson: open-ended, checkup: 3-5 min.;basic math. students

PAINT AND COMPARE (reccomp;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces a method of comparing two fractions.
touch panel;open-ended;students of basic mathematics

PAINTINGS LIBRARY (reclib;1975;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson consists of a library of students' "paintings". It encourages painting a fraction of a box different ways. It inititiates the idea of re-arranging the painted areas without changing the fraction painted and provides opportunities to notice equivalent fractions. The lesson also allows the students to share their work with each other.
touch panel;open-ended;students of basic mathematics

PICK A TUB (tubs;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience estimating positions of pure fractions on a number line. The lesson is in game format and can be played by one or two players.
touch panel;open-ended;students of basic mathematics

PINBALL (pinw;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The student practices basic number facts as a ball bounces from problem to problem as in a pinball machine. Points are earned by answering each problem within the time limit. The lesson keeps a list of 20 students who have made the highest scores.
none;open-ended;students of basic mathematics

PIZZA: ASSORTED PROBLEMS (pizza5;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen; et al.
U of I, NSF Fractions Elem. Math. Group, CERL
This lesson is a composite of lessons "Pizza: Fractions," "Pizza: Cutter Stuck," "Pizza 2 Pizzas for 3 Kids," and "Pizza: Mixed Numbers Introduction." Problems from the four lessons are mixed together to create a sequence that may be more interesting and thought-provoking than each lesson done separately.
touch panel:1-2 hours:students of basic mathematics

PIZZA: COMMON DENOMINATOR (pcd;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides experience finding and using a common denominator with a familiar model.
touch panel:20-30 minutes:students of basic mathematics

PIZZA: CUTTER STUCK (pizza2;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen; et al.
U of I. NSF Fractions Elem. Math. Group, CERL
This lesson begins the instruction in equivalent fractions.
touch panel;20-30 minutes;students in basic mathematics

PIZZA: FRACTIONS (pizza1:1975.76.77;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson is one of a series on mixed numbers and fractions. The lesson is designed to re-emphasize with a physical model that 3/4 is 3 of a fourth. The concept is extended to fractions >1.
touch panel:20-30 minutes:students of basic mathematics

PIZZA: MIXED NUMBERS INTRODUCTION (pizza4;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen; et al.
U of I NSF Fractions Elem. Math. Group, CERL
This lesson introduces the idea that a fraction and a mixed number can name the same number, then gives the student practice converting mixed numbers to pure fractions and vice versa.
touch panel;20-30 minutes;students of basic mathematics

PIZZA: 2 PIZZAS FOR 3 KIDS (pizza3:1975:1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen; et al.
U of I NSF Fractions Elem. Math. Group, CERL
This lesson relates fractions to division. It uses the pizza model to suggest that x÷y is the same as the fraction x/y.
touch panel;20-30 minutes;students of basic mathematics

SIMPLEST TERMS (sterms:1975:1978)
Dugdale. Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL

The lesson defines "simplest terms" and presents a systematic method for finding the simplest terms name for any fraction. The file contains not only the lesson, but a checkup for review of the material in the lesson.

none:lesson: open-ended, checkup: 3-5 minutes;students of basic mathematics

SIMPLIFYING ANSWERS TO ADDITION PROBLEMS (padl:1975:1978)
Dugdale. Sharon: Kibbey. David; Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL

The lesson points out the need for simplifying the answer to an addition problem.

none:5-10 minutes;students of basic mathematics

SKYWRITING AND SPIDER WEB (sky;1975;1978)
Dugdale. Sharon: Kibbey. David: Cohen. Barry
U of I NSF Fractions Elem. Math. Group, CERL

The lesson allows a student to write a program to move an airplane around the screen. The lesson provides an experience with a new unit -- a turn, and experience with very basic programming ideas. It also allows students to share their programs with other students through the program library.

none;open-ended;students of basic mathematics

SORT EQUIVALENT FRACTIONS (sorteqf;1975:1978)
Dugdale. Sharon: Kibbey. David: Leung. Helen
U of I NSF Fractions Elem. Math. Group, CERL

The lesson provides practice identifying equivalent fractions. This is for students who already have a basic understanding of equivalent fractions. The lesson also contains a checkup reviewing the material in the lesson.

touch panel:lesson: 40-45 minutes, checkup: 3-5 minutes;basic math. students

SORT EQUIVALENT MIXED NUMBERS (sorteqm:1978:1978)
Dugdale. Sharon: Kibbey. David: Leung. Helen
U of I NSF Fractions Elem. Math. Group, CERL

The lesson provides practice identifying equivalent mixed numbers. This is for students who already have a basic understanding of equivalent fractions and mixed numbers.

touch panel;30-45 minutes;students of basic mathematics

SORT EQUIVALENT PROBLEMS (sortad;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL

The lesson introduces the idea that renaming the numbers in an addition or subtraction problem makes another name for the same problem. The idea is useful when finding a common denominator for addition and subtraction.

touch panel;open-ended;students of basic mathematics

SORT NUMBER NAMES WITH DECIMALS (sortd:1975:1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives practice identifying equivalent whole numbers, fractions, mixed numbers and decimal numbers.
none;open-ended;students of basic mathematics

SORT NUMBERS BY FORM (sortf:1975:1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives the student practice in distinguishing "fractions", "mixed numbers", and "whole numbers". The lesson is essential for the understanding of the vocabulary used in further fractions lessons.
touch panel;5-15 minutes;students of basic mathematics

STANDARD FORM PRACTICE (pad1:1975:1978)
Dugdale, Sharon: Kibbey, David: Cohen, Barry
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives the student practice in writing fractions and mixed numbers in standard form. There is also a checkup in the same file reviewing the material covered in this lesson.
none;lesson: 5-15 minutes, checkup: 2-5 minutes:basic math. students

STICKS AND STRINGS (rods;1975;1978)
Golden, William M; Dugdale, Sharon; Kibbey, David; et al.
Computer-based Education Research Lab., U of I
The lesson teaches the student a method for dividing a stick into fractional parts. Sticks of four different lengths are used. The lesson allows the student to construct halves and thirds of various lengths. The importance of the unit length is emphasized.
none:20-30 minutes:students of basic mathematics

STRATEGIES FOR LISTING EQUIVALENCE SETS (strad;1975;1978)
Dugdale, Sharon: Kibbey, David: Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice adding and subtracting fractions and mixed numbers, using equivalence sets to find a common denominator; points out that more common denominators can be found by listing more names: develops strategies for listing names: and enables the student to solve addition and subtraction problems without relying on guidance from PLATO.
touch panel:open-ended:students of basic mathematics

STRATEGIES FOR MULTIPLYING MIXED NUMBERS (fmstrat;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson demonstrates that there are many ways to multiply mixed numbers. It encourages the student to examine each problem and to choose a method appropriate for the particular problem.
none;open-ended;students of basic mathematics

SUBTRACTION WITH BORROWING (pad2;1975;1978)
Dugdale, Sharon; Kibbey, David; Cohen, Barry; et al.
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces a method for solving subtraction problems like 3 1/3 - 2/3.
touch panel;20-30 minutes;basic math. students

TARGET PRACTICE (rocket;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson presents addition practice which may encourage checking the answer by estimation.
none;open-ended;students of basic mathematics

TORPEDO!: DECIMAL TORPEDO; WHOLE NUMBER TORPEDO (sea;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
There are three parts to this lesson, each part being an interterminal game in which two students compete. The games provide practice estimating distances on the number line. Part 1 is for fractional distances, part 2 uses decimal numbers, and part 3 whole numbers for reading the number line scale and doing the distance estimation.
none;open-ended;students of basic mathematics

TRY THESE: EQUIVALENT FRACTIONS (tryeq;1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice with equivalent fractions. It is for students who have a basic understanding of equivalent fractions, but who need practice. There is a checkup available for review of the material in the lesson.
none;the lesson: 20-30 minutes the checkup: 3-5 minutes;basic math. students

TRY THESE: EQUIVALENT MIXED NUMBERS (tryeq;1978;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson provides practice renaming mixed numbers as is done in addition and subtraction of mixed numbers. It is for students who already have a basic understanding, but need practice.
none;lesson: 20-30 minutes, checkup: 3-5 minutes;basic math. students

UNITS (funits;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group. CERL
This lesson points out the importance of the unit. There are ten independent pages in the lesson. On each page some kids on the screen discuss a situation involving units.
none;10-20 minutes;students of basic mathematics

VOCABULARY: WHOLE NUMBER, FRACTION, MIXED NUMBER (nlintroc:1975;1978)
Dugdale, Sharon; Kibbey, David; Layman, Tom
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the vocabulary: whole numbers, fractions and mixed numbers, used in future lessons.
none;open-ended;students of basic mathematics

Fractions (Mathematics, Community college and adult educ.)

EXERCISES -- ARITHMETIC OPERATIONS ON FRACTIONS (fracprac:1976:unpublished)
Bailey, Keith; Lassner, David
Community College Math. Group, CERL, Univ. of Ill.
The lesson offers the student practice in performing common operations with fractions, and ends with a set of mixed exercises, the mastery of which is necessary to complete the lesson. The rules of each fraction operation are available to the student as well as brief quizzes in each section of the lesson.
none:60 minutes:high school and above

FRACTIONS ON THE NUMBER LINE (rfrac;1976;1978)
Bailey, Keith
Comp.-based Educ. Res. Lab.. Univeritv of Illinois
This lesson teaches how to locate fractions on the number line and shows how this model can be used for comparing ing fractions, determining equivalent fractions and converting improper fractions to mixed numbers. It also demonstrates the relationship between division and fractions.
none;40 minutes;basic mathematics students

France

Description. geography

LA GÉOGRAPHIE DE LA FRANCE (geofr1;1976;1977)
Marty, Fernand; Kuhn, Robert
French Department, University of Illinois
This is a lesson on the geography of France presented in French in 20 parts. The English translation, section by section, is available. The lesson is followed by a test which can also be accessed directly at the beginning of the lesson.
microfiche, audio disc;two hours:high school/college

Freezing points

MOLECULAR WEIGHT DETERMINATION BY FREEZING POINT METHOD (freeze;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson teaches the theory of freezing point depression when a solute is added to a solvent, and then the student performs a simulated experiment on the freezing point depression of benzene solutions.
none;81 minutes;students of general chemistry

French language

Inflection

ELEMENTS FOR SELF-EXPRESSION IN FRENCH (wftable;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois
This French course has 697 language exercises contained in 257 PLATO files. From this broad index you can obtain general information about the course, a table of contents, access to individual chapters, syntax exercises and index by types of exercises, and names of PLATO files.
audio, microfiche, texts;320 hours for complete course;high school/college

ELEMENTS FOR SELF-EXPRESSION IN FRENCH: SYNTAX, MORPHOLOGY (wf1;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois
These French lessons familiarize the student with the sentence patterns which are used to express concepts. For brief description of individual lessons, see "Further Information."
audio discs, textbook;360 hours for course;high school/college

SÉRIE LINGUISTIQUE APPLIQUÉE (tf1;1976;1977)
Marty, Fernand; Ariew, Robert
French Department, University of Illinois
This lesson and the following one, "tf2", comprise a series of French linguistic exercises which are presented in ten parts.
audio disc;12 hours;none

Word formation

ELEMENTS FOR SELF-EXPRESSION IN FRENCH (wftable;1976;unpublished)
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audio, microfiche, texts;320 hours for complete course;high school/college

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Marty, Fernand; Ariew, Robert
French Department, University of Illinois
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audio disc;12 hours;none

THE FRENCH LANGUAGE IN THE WORLD, PARTS I & II (frcivil;1979;unpublished)
Marty, Fernand
French Department, University of Illinois
This lesson attempts to provide the user with some important historic information about the French language which should enable better understanding of the importance of French in this last quarter of the twentieth century. Part one treats the language as it developed in France; part two discusses the French language in Europe, America, Africa and Asia.
none;45 minutes;persons interested in the French language

French language in Africa

THE FRENCH LANGUAGE IN THE WORLD, PARTS I & II (frcivil;1979;unpublished)
Marty, Fernand
French Department, University of Illinois
This lesson attempts to provide the user with some important historic information about the French language which should enable better understanding of the importance of French in this last quarter of the twentieth century. Part one treats the language as it developed in France; part two discusses the French language in Europe, America, Africa and Asia.
none;45 minutes;persons interested in the French language

French language in Asia

THE FRENCH LANGUAGE IN THE WORLD, PARTS I & II (frcivil;1979;unpublished)
Marty, Fernand
French Department, University of Illinois
This lesson attempts to provide the user with some important historic information about the French language which should enable better understanding of the importance of French in this last quarter of the twentieth century. Part one treats the language as it developed in France; part two discusses the French language in Europe, America, Africa and Asia.
none;45 minutes;persons interested in the French language

French language in Canada

THE FRENCH LANGUAGE IN THE WORLD, PARTS I & II (frcivil;1979;unpublished)
Marty, Fernand
French Department, University of Illinois

This lesson attempts to provide the user with some important historic information about the French language which should enable better understanding of the importance of French in this last quarter of the twentieth century. Part one treats the language as it developed in France; part two discusses the French language in Europe, America, Africa and Asia.

none;45 minutes;persons interested in the French language

French language in the United States

THE FRENCH LANGUAGE IN THE WORLD, PARTS I & II (frcivil;1979;unpublished)
Marty, Fernand
French Department, University of Illinois

This lesson attempts to provide the user with some important historic information about the French language which should enable better understanding of the importance of French in this last quarter of the twentieth century. Part one treats the language as it developed in France; part two discusses the French language in Europe, America, Africa and Asia.

none;45 minutes;persons interested in the French language

French language--Conversation

ELEMENTS FOR SELF-EXPRESSION IN FRENCH (wftable;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois

This French course has 697 language exercises contained in 257 PLATO files. From this broad index you can obtain general information about the course, a table of contents, access to individual chapters, syntax exercises and index by types of exercises, and names of PLATO files.

audio, microfiche, texts;320 hours for complete course;high school/college

ELEMENTS FOR SELF-EXPRESSION IN FRENCH: DIALOGUES (wfd;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois

These French dialogue lessons, which can be done in the French to English mode or English to French mode, are designed to give the student practice in conversation. They can be used for dictation also.

audio, microfiche, texts;none;high school/college students

French language--Grammar

ELEMENTS FOR SELF-EXPRESSION IN FRENCH: SYNTAX, MORPHOLOGY (wf1;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois

These French lessons familiarize the student with the sentence patterns which are used to express concepts. For brief description of individual lessons, see "Further Information."

audio discs, textbook;360 hours for course;high school/college

426
FRENCH VERB CONJUGATOR (frverbl;1979;1980)
Marty, Fernand; Hart, Robert
French Department, University of Illinois
This lesson is the first in a series which allow the student to compose conjugation exercises with the verbs and tenses that need to be practiced. Each form of the verbs and tenses selected will be presented until the correct answer can be given without help. Two levels of difficulty are available.
none;open-ended;high school/college

French language--Orthography and spelling

ELEMENTS FOR SELF-EXPRESSION IN FRENCH (wftable;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois
This French course has 697 language exercises contained in 257 PLATO files. From this broad index you can obtain general information about the course, a table of contents, access to individual chapters, syntax exercises and index by types of exercises, and names of PLATO files.
audio, microfiche, texts;320 hours for complete course;high school/college

ELEMENTS FOR SELF-EXPRESS. IN FRENCH: SPELL.-READ. (sprl;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois
These lessons are constructed to give the student the greatest possible understanding of French spelling and use of supplementary letters, vowel sounds, semi-vowel sounds and consonants. Reading problems are also presented.
audio discs, textbook;none;high school/college students

French language--Phonetics

ELEMENTS FOR SELF-EXPRESSION IN FRENCH (wftable;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois
This French course has 697 language exercises contained in 257 PLATO files. From this broad index you can obtain general information about the course, a table of contents, access to individual chapters, syntax exercises and index by types of exercises, and names of PLATO files.
audio, microfiche, texts;320 hours for complete course;high school/college

ELEMENTS FOR SELF-EXPRESSION IN FRENCH: PHONOLOGY (phnl;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois
These lessons are designed so that the student will acquire the ability to accurately analyze components of the spoken and written forms of the French language.
audio discs, textbook;none;high school/college students

SÉRIE LINGUISTIQUE APPLIQUÉE (tfl;1976;1977)
Marty, Fernand; Ariew, Robert
French Department, University of Illinois
This lesson and the following one, "tf2", comprise a series of French linguistic exercises which are presented in ten parts.
audio disc;12 hours;none

French language--Phonology

ELEMENTS FOR SELF-EXPRESSION IN FRENCH (wftable;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois
This French course has 697 language exercises contained in 257 PLATO files. From this broad index you can obtain general information about the course, a table of contents, access to individual chapters, syntax exercises and index by types of exercises, and names of PLATO files.
audio, microfiche, texts;320 hours for complete course;high school/college

ELEMENTS FOR SELF-EXPRESSION IN FRENCH: PHONOLOGY (phnl;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois
These lessons are designed so that the student will acquire the ability to accurately analyze components of the spoken and written forms of the French language.
audio discs, textbook;none;high school/college students

French language--Pronunciation

ELEMENTS FOR SELF-EXPRESSION IN FRENCH (wftable;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois
This French course has 697 language exercises contained in 257 PLATO files. From this broad index you can obtain general information about the course, a table of contents, access to individual chapters, syntax exercises and index by types of exercises, and names of PLATO files.
audio, microfiche, texts;320 hours for complete course;high school/college

ELEMENTS FOR SELF-EXPRESSION IN FRENCH: PHONOLOGY (phnl;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois
These lessons are designed so that the student will acquire the ability to accurately analyze components of the spoken and written forms of the French language.
audio discs, textbook;none;high school/college students

ELEMENTS FOR SELF-EXPRESS. IN FRENCH: SPELL.-READ. (sprl;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois

These lessons are constructed to give the student the greatest possible understanding of French spelling and use of supplementary letters, vowel sounds, semi-vowel sounds and consonants. Reading problems are also presented.

audio discs, textbook;none;high school/college students

French language--Spoken language

ELEMENTS FOR SELF-EXPRESSION IN FRENCH: DIALOGUES (wfd;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois

These French dialogue lessons, which can be done in the French to English mode or English to French mode, are designed to give the student practice in conversation. They can be used for dictation also.

audio, microfiche, texts;none;high school/college students

French language--Syntax

ELEMENTS FOR SELF-EXPRESSION IN FRENCH: SYNTAX, MORPHOLOGY (wfl;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois

These French lessons familiarize the student with the sentence patterns which are used to express concepts. For brief description of individual lessons, see "Further Information."

audio discs, textbook;360 hours for course;high school/college

Fruit-flies

DROSPHILIA GENETICS (cfly;1968;unpublished)
Hyatt, Gary; Eades, David C; Tenczar, Paul J; et al.
Comp.-based Educ. Res. Lab., Univ. of Illinois

This lesson contains simple lab exercises in fruit fly genetics, simulated through graphic depiction of inherited characteristics to show the dominant traits of the parents. The student selects parents to mate, and through randomized permutations of the inherited traits according to genetic laws, the offspring are depicted.

none;open-ended;college/university students

Fruit--Morphology

FRUITING AND LEAF SENESCENCE (botb;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.

This lesson describes fruit formation, growth and maturation and enables the student to deduce the physiology of leaf abscission from hormone experiments.

none;15-20 minutes;college/university students

Fruit--Ripening

FRUITING AND LEAF SENESCENCE (botb;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson describes fruit formation, growth and maturation and enables the student to deduce the physiology of leaf abscission from hormone experiments.
none;15-20 minutes;college/university students

Fuel--Tables, calculations, etc.

CURRENT UNITED STATES ENERGY CONDITION MODEL (oil;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, current United States energy conditions can be shown. Variables can be changed for each graph.
none;open-ended;persons interested in populations

ENERGY DEMAND PROJECTIONS MODEL (popecon1;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using energy demand variables can be graphed. A list of available regions is provided and the variables can be changed for each projection.
none;open-ended;persons interested in populations

OIL AND MAJOR PRODUCING COUNTRIES MODEL (pdgwork;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using oil and major producing countries variables may be graphed.
none;open-ended;persons interested in populations

UNITED STATES ENERGY AND DEMAND AND SUPPLY MODEL (uspower;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using United States energy demand and supply variables can be graphed. The variables and parameters can be changed for each projection.
none;open-ended;persons interested in populations

WORLD PETROLEUM FLOW MODEL (oilmap;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using world petroleum flow variables can be shown. A list of available geographical regions is provided and variables and parameters can be changed for each projection.
none;open-ended;persons interested in populations

Functional group chemistry

Acids

INTRODUCTION TO CARBOXYLIC ACIDS (rcooh;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson deals with carboxylic acids, their structure, nomenclature and acidity.
none;35 minutes;college/university students

PREP. AND REACTIONS OF CARBOXYLIC ACID: PRACTICE PROBLEMS (acidprob;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson offers review problems on the interconversion of acids, esters, amides, acid chlorides and amides.

It does not function without a touch panel.
touch panel;25 minutes;college/university students

PREP. AND REACT.: ACID CHLORIDES, ESTERS, ANHYDRIDES, AMIDES (rcocl;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a review of the reactions involved in the formation of acid chlorides, esters, anhydrides and amides and then numerous practice problems for the student on these derivatives of carboxylic acids.
none;56 minutes;college/university students

Alcohols

ALCOHOLS (roht;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson teaches the common and IUPAC names of alcohols. It discusses the preparation by reduction of C=O, hydration, hydroboration, hydrolysis of HX, and Grignard additions. The reactions included are: oxidation, conversion to RX, dehydration, salt and ether formation.
none;89 minutes;college/university students

BRIEF INTRODUCTION TO IR SPECTROSCOPY (ir2;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a brief introduction to infrared spectroscopy and several practice problems in the recognition of the infrared spectrum of some common functional groups: alcohols, amines, aldehydes, ketones, and esters.
microfiche;51 minutes;college/university students

PREPARATION AND REACTIONS OF ALCOHOLS: PRAC. PROBLEMS (rohprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The student is given practice problems to solve associated with the preparation and reactions of alcohols.
touch panel;29 minutes;college/ university students

Aldehydes

BRIEF INTRODUCTION TO IR SPECTROSCOPY (ir2;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a brief introduction to infrared spectroscopy and several practice problems in the recognition of the infrared spectrum of some common functional groups: alcohols, amines, aldehydes, ketones, and esters.
microfiche;51 minutes;college/university students

REACTIONS OF ALDEHYDES AND KETONES (PART 2) (ketone2;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson continues the discussions of reactions of aldehydes and ketones.The subjects include enolization, H-D exchange, halogenation of ketones, and aldol condensation reactions with appropriate problems.
none;55 mminutes;college/university students

REACTIONS OF ALDEHYDES AND KETONES: PRAC. PROBLEMS (ketprob;1975,1978;1977)
Smith, Stanley
Chemistry Department, University of Illinois
Practice problems are presented for some reactions associated with the preparation and reactions of aldehydes and ketones.
touch panel;23 minutes;college/university students

SOME ADDITION REACTIONS OF ALDEHYDES AND KETONES (ketone;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is in two parts. The first part contains a simulated experiment to determine the mechanism of cyanohydrin formation. It deals with hemiacetals, acetals, etc. The experimental determination of the pH rate profile for oxime formation is illustrated and the formation of phenylhydrazone and DNP formation is included.
none;42 minutes;college/university students

Alkanes

FREE RADICAL HALOGENATION REACTIONS (radical;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson illustrates the mechanism of free radical chlorination and bromination of alkanes and shows how to calculate the heats of reactions from bond energies.
none;57 minutes;college/university students

Alkenes

ALKENE CHEMISTRY (alkenet;1974;1977)

Smith, Stanley
Chemistry Department, University of Illinois

This lesson on alkene chemistry discusses the structure, nomenclature, hydrogenation, bromination and hydroboration of alkenes, and includes animations of and simulated experiments on alkene reactions.

touch panel;44 minutes;college/university students

PREPARATION AND REACTIONS OF ALKENES (eneprob;1974;1977)

Smith, Stanley
Chemistry Department, University of Illinois

Practice problems are presented for reactions associated with the preparation and additions to alkenes. The student is given a group of compounds and reagents and must find interconversions between them by touching the corresponding reactant, reagent and product.

touch panel;28 min;college/ university students

Alkynes

ALKYNE CHEMISTRY (alkynes;1977;1978)

Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.

The lesson provides an introduction to the carbon-carbon triple bond acetylenes, known also as alkynes. Information on the structure, nomenclature, preparation and reactions is given.

none;none;college and university students of organic chemistry

Amines

BRIEF INTRODUCTION TO IR SPECTROSCOPY (ir2;1976;1977)

Smith, Stanley
Chemistry Department, University of Illinois

The lesson presents a brief introduction to infrared spectroscopy and several practice problems in the recognition of the infrared spectrum of some common functional groups: alcohols, amines, aldehydes, ketones, and esters.

microfiche;51 minutes;college/university students

PREPARATION AND REACTIONS OF AMINES (amines;1976;1977)

Smith, Stanley
Chemistry Department, University of Illinois

Preparation and reactions of amines with problems.

none;none;college/university students

PREPARATION AND REACTIONS OF AMINES - PRAC. PROBLEMS (amineprob;1976;1978)

Smith, Stanley
Chemistry Department, University of Illinois

This lesson gives the student practice in using some of the reactions associated with the preparation and reactions of aliphatic amines.

touch panel;20 minutes;college/university students

Arenes

DRAWING KEKULE' STRUCTURES OF ARENES (kekule;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson deals with drawing Kekule' structures of arenes. The student indicates, by touching the screen, the positions of the double bonds in five different areas.
touch panel;60 minutes;college/university students

Aromatic compounds

ELECTROPHILIC AROMATIC SUBSTITUTION (arene;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson deals with the introduction of substituents on a benzene ring. The mechanism of electrophilic substitution and its directive effects are presented.
none;58 minutes;college/university students

Esters

BRIEF INTRODUCTION TO IR SPECTROSCOPY (ir2;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a brief introduction to infrared spectroscopy and several practice problems in the recognition of the infrared spectrum of some common functional groups: alcohols, amines, aldehydes, ketones, and esters.
microfiche;51 minutes;college/university students

ESTERS OF CARBOXYLIC ACID (esters;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson is on the preparation and reactions of esters. Experiments are simulated to determine the mechanism of esterification, labeled oxygen exchange and hydrolysis.
none;28 minutes;college/university students

Ketones

BRIEF INTRODUCTION TO IR SPECTROSCOPY (ir2;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a brief introduction to infrared spectroscopy and several practice problems in the recognition of the infrared spectrum of some common functional groups: alcohols, amines, aldehydes, ketones, and esters.
microfiche;51 minutes;college/university students

434
REACTIONS OF ALDEHYDES AND KETONES (PART 2) (ketone2;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson continues the discussions of reactions of aldehydes and ketones.The subjects include enolization, H-D exchange, halogenation of ketones, and aldol condensation reactions with appropriate problems.
none;55 mminutes;college/university students

REACTIONS OF ALDEHYDES AND KETONES: PRAC. PROBLEMS (ketprob;1975,1978;1977)
Smith, Stanley
Chemistry Department, University of Illinois
Practice problems are presented for some reactions associated with the preparation and reactions of aldehydes and ketones.
touch panel;23 minutes;college/university students

SOME ADDITION REACTIONS OF ALDEHYDES AND KETONES (ketone;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is in two parts. The first part contains a simulated experiment to determine the mechanism of cyanohydrin formation. It deals with hemiacetals, acetals, etc. The experimental determination of the pH rate profile for oxime formation is illustrated and the formation of phenylhydrazone and DNP formation is included.
none;42 minutes;college/university students

Organometallic compounds

ORGANOMETALLIC CHEMISTRY (orgmet;1976;1978)
Wiegers, Karl
Chemistry Dept., Univ. of Illinois, Urbana, Ill.
The lesson discusses the structure, preparation and reactions of several classes of organometallic compounds.
none;none;college or university students of organic chemistry

SUBSTITUTION AND ELIMINATION (sn2t;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The student explores the effects of the structure of alkyl halide and the effect of alkoxide concentration on the rates of these reactions and on the ratio of substitution to elimination.
none;43 minutes;college/university students

435
SUBSTITUTION AND ELIMINATION REACTIONS - PRACTICE PROBLEMS
(subprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson allows the student to practice substitution and elimination reactions. The lesson can only be used with a touch panel. The student is asked to indicate, by touching the appropriate spot on the screen, the starting materials, reagents and products for the reactions.
touch panel;33 minutes;college/university students

Games
see Educational games

Games
see Recreational games

Gas chromatography
BASIC GAS CHROMATOGRAPHY (vuchrom;1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is designed to teach the basic concepts of gas chromatography. It can be used by students in any course where the gas chromatograph is used. The lesson teaches the basic nomenclature and operating parameters for a gas chromatograph.
none;60 minutes;students of analytic chemistry

Gases
--in chemistry
BEHAVIOR OF GASES (shp63;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas
This lesson discusses the properties of gases and their measurement and the pressure, volume and temperature relationships.
none;60 minutes;physicians' assistants

IDEAL GASES AND REAL FLUIDS - PART I (chel1;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana
This is the first of two lessons dealing with the ideal and real gas laws for both pure components and mixtures. The emphasis in this first part is on the van der Waals equation and the Virial equation.
none;97 minutes;sophomore chemical engineering students

IDEAL GASES AND REAL FLUIDS - PART II (chel7;1978;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, University of Illinois
This is the second of two lessons dealing with ideal and real gas laws for pure components and mixtures. The emphasis is on the theory of corresponding states as applied to both pure gases and gas mixtures and demonstrates the application of various real gas laws to gas mixtures.
none;55 minutes;sophomore level chemical engineering students

PROPERTIES OF IDEAL GASES (gaslaws;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson deals with the relationship between the pressure that gas exerts on the walls of a container and its temperature, volume, and number of moles of gas in the container. It provides the experimental derivation of the ideal gas laws.
touch panel;67 minutes;college/university chemistry students

PV=NRT, SOLVING PROBLEMS USING THE IDEAL GAS LAW (pvnrt;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson teaches the student how to solve problems using the ideal gas law, PV=nRT. It is assumed that the student knows how to solve simple mathematical equations for any value of each variable and to use units correctly including the conversion between units, but a quick review of the necessary algebra for the required manipulation is given.
touch panel;24 minutes;college/university students

SOLVING IDEAL GAS LAW PROBLEMS: CHANGING CONDITIONS (pvt;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
In this lesson the student practices calculating the final values of the variables in the ideal gas law equation when the initial conditions are given and there are changes in the variables. Boyles' and Charles' Laws are presented and problems involving those laws are also included.
touch panel;17 minutes;college/university students

Gases--Diffusion

DIFFUSION OF GASES (shp68;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas
This lesson discusses the diffusion of gases by dissolution in a liquid, specifically the dissolution of respiratory gases in the blood and subsequent diffusion in the lungs.
none;2 hours;physicians' assistants

Gastrointestinal agents

MICROQUIZ II: GASTROINTESTINAL INFECTIONS (gastroquiz;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson is in a quiz-game format and reviews topics of habitat, transmission, morphology, growth, diagnostic techniques, immunology, pathogenicity, and chemotherapy of gastrointestinal infectious agents such as protozoa, helminths, salmonella, shigella, coliform, bacilli, and enteric bacilli.
none;20 minutes;first year medical students

Gastrointestinal hemorrhage

DIFFERENTIAL DIAGNOSIS GI HEMORRHAGE (gihem;1975;unpublished)
Trachtenbarg, David E; Poncher, Randy
Abraham Lincoln School of Medicine, Univ. of Illinois
In this simulation lesson, the user acts as a first-year resident and sees a pediatric patient in the emergency room. The supervisor asks questions about many of the resident's decisions to see if knowledge of the basic medical facts is sound. Decisions must be made about managing the patient in terms of history, lab, physical exam and treatment.
none;14 minutes;medical students

Generations, Alternating

PLANT LIFE CYCLES (cycles;1974;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson constructs a diagram of a generalized plant life cycle, discusses the relationship between gametophyte and sporophyte generations and illustrates how this relationship differs throughout the plant kingdom, with special emphasis on its evolutionary significance.
microfiche;90 minutes;college/university students

Genetic code

BIOSYNTHESIS OF PROTEIN (shp8;1974;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas
This lesson will describe the main sequence of events leading to the synthesis of nucleic acids and protein in the cell, identify the roles played by the nucleic acids in the biosynthesis of protein, and predict the effect of point mutations on protein primary structure.
none;60 minutes;physicians' assistants

DNA AND PROTEIN SYNTHESIS (xcell;1968;unpublished)
Tenczar, Paul J
Comp.-based Educ. Res. Lab., University of Illinois

This two part lesson begins with a summary and introduction to DNA, RNA, the genetic code and protein synthesis. If the basics are already understood, the student may go directly to part two. In part two, three amino acids and the corresponding m-RNA codes are provided and the student must determine the DNA and t-RNA codes needed to synthesize the protein.

none;30-60 minutes;first year biology students

GENETIC CODE (code1;1976;1976)
Kaplan, Samuel; Francis, Rosanne; Schwaiger, Jim
Dept. of Microbiology, Sch. of Life Sciences, U of I

This is a series of lessons for studying the fundamental nature of the genetic code as revealed by a study of the experiments of Brenner, Crick, Khorana and colleagues. The latter part of the sequence of lessons allows the students to run simulations in the techniques used by the above experimentors so as to crack the genetic code.

none;5 hours;college or university students of microbiology.

Genetic transcription

BIOSYNTHESIS OF PROTEIN (shp8;1974;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas

This lesson will describe the main sequence of events leading to the synthesis of nucleic acids and protein in the cell, identify the roles played by the nucleic acids in the biosynthesis of protein, and predict the effect of point mutations on protein primary structure.

none;60 minutes;physicians' assistants

DNA AND PROTEIN SYNTHESIS (xcell;1968;unpublished)
Tenczar, Paul J
Comp.-based Educ. Res. Lab., University of Illinois

This two part lesson begins with a summary and introduction to DNA, RNA, the genetic code and protein synthesis. If the basics are already understood, the student may go directly to part two. In part two, three amino acids and the corresponding m-RNA codes are provided and the student must determine the DNA and t-RNA codes needed to synthesize the protein.

none;30-60 minutes;first year biology students

Genetic translation

BIOSYNTHESIS OF PROTEIN (shp8;1974;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas

This lesson will describe the main sequence of events leading to the synthesis of nucleic acids and protein in the cell, identify the roles played by the nucleic acids in the biosynthesis of protein, and predict the effect of point mutations on protein primary structure.

none;60 minutes;physicians' assistants

Genetics
see also Population genetics

CHROMOSOMES AND KARYOTYPING, PART I (chrom;1975;unpublished)
Chirolas, Darlene
School of Basic Medical Sciences, Univ. of Illinois
This lesson describes the characteristics and classification of chromosomes and presents the standard human karyotype symbols and notation. Eight syndromes are explained along with the karyotype notation and clinical signs for each. Barr bodies and the Lyon hypothesis are also discussed.
microfiche;30 minutes;first year medical students

CHROMOSOMES AND KARYOTYPING, PART II (karyo;1975;unpublished)
Chirolas, Darlene; Tenczar, Paul J
School of Basic Medical Sciences, Univ. of Illinois
This two part lesson deals with identification of karyotypes and actual karyotyping.
touch panel and microfiche;15 minutes;first year medical students

DROSPHILIA GENETICS (cfly;1968;unpublished)
Hyatt, Gary; Eades, David C; Tenczar, Paul J; et al.
Comp.-based Educ. Res. Lab., Univ. of Illinois
This lesson contains simple lab exercises in fruit fly genetics, simulated through graphic depiction of inherited characteristics to show the dominant traits of the parents. The student selects parents to mate, and through randomized permutations of the inherited traits according to genetic laws, the offspring are depicted.
none;open-ended;college/university students

GENE MAPPING IN DIPLOID ORGANISMS (cover;1973;unpublished)
Scotese, Karen Frank
University of Illinois Circle Campus, Chicago, Ill.
This lesson discusses crossover and gene mapping and follows with practice problems.
none;60-90 minutes;biology students and persons interested in genetics

GENETIC DRIFT (drift;1974;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses standard Hardy-Weinberg equations (with stochastic parameter) to allow students to investigate the effects of variables associated with genetic drift ("founder effect"). Students decide the size of the founder population to be used as parents in succeeding generations.
none;45 minutes;university/college biology students

GENETIC RISK ESTIMATES (genrisk;1977;unpublished)
Daniel, William; Brenner, Lisa; Schultz, Stephen
School of Basic Medical Sciences, Univ. of Illinois
This lesson teaches the student to calculate genetic risks for single factor traits, to define prior and posterior probabilities, to calculate these probabilities using family history data and to interpret the risk figures to a layman. Pre- and post-tests are included.
none;none;first year medical students

GENETICS AND HEREDITY (genet;1978;unpublished)
Baillie, Robert; Hyatt, Gary; Noell, John
Department of Botany, U of I, Urbana, Ill.
This lesson treats genetics and heredity through discussion and illustration of Mendel's Laws.
none;20 minutes;college/university students

LABORATORY TESTS (shp14;1974;unpublished)
Lacoe, Robert E; Kimball, R M
Sheppard Air Force Base, Texas
This lesson discusses the Rh-hr system and stresses the importance of this system in the practice of medicine. The student then uses this information in a simulated test.
none;7.5 hours;physicians' assistants

MEDICAL GENETICS LABORATORY: METABOLIC DISEASES AND MEDICINE (genlab;1977;unpublished)
Li, I-Chian; Daniel, William; Brenner, Lisa; et al.
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents two patients, each with a metabolic disease. The student is provided with clinical, laboratory and family data and is requested to diagnose the specific disorder, provide a description of the molecular basis of the disease and provide recurrence risks. Branch pathways are provided to permit actual lab experience or test results.
microfiche;open-ended;first year medical students

PEDIGREES: READING AND WRITING THEM (pedigree;1975;unpublished)
Chirolas, Darlene
School of Basic Medical Sciences, Univ. of Illinois
This lesson explains the symbols and terms used in constructing a pedigree and provides a step-by-step guide to building a pedigree. Matching and identification questions reinforce the meanings of the pedigree symbols. Questions about sample pedigrees provide extra drill.
none;15 minutes;first year medical students

POPULATION GENETICS (hpopgen;1977;unpublished)
Daniel, William; Seyfried, Thomas; Brenner, Lisa; et al.
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides primary instruction in the basics of population genetics. The Hardy-Weinberg equilibrium is reviewed and mutation, migration, selection and drift are discussed. Emphasis is on leading the student toward understanding the concepts, and acquiring competence in executing the associated calculations.
none;none;first year medical students

PROBABILITY AND HEREDITY (proba;1977;1978)
Baillie, Robert; Hyatt, Gary
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson defines probability, demonstrates Mendel's laws, and gives the student some practice with probabiltiy problems and genetic crosses.
none;40-50 minutes;college/university students

Geography

see France

Geography, African

WELCOME TO AFRICA (africanc;1975;1979)
Conkright, Jan; Conkright, Tom
Dept. of Linguistics, U of I, Urbana, Illinois
This is a practice lesson on African culture which discusses African cultural groups, African geography, and the naming ceremony.
touch panel;none;persons interested in the study of African culture

Geology--Charts, diagrams, etc.

NEW GLOBAL TECTONICS AND CONTINENTAL DRIFT (earth;1975;unpublished)
Scotese, Christopher
University of Illinois Circle Campus, Chicago, Ill.
This lesson presents a unifying, working hypothesis called plate tectonics, which provides a kinematic model of the upper layer of the earth. It can be used to make quantitative predictions about most phenomena studied by the different disciplines of the earth sciences.
none;open-ended;students of earth sciences

Geometry, Analytic

GRAPHICS (graphics;1976;1977)
Schreiner, Axel T
Mathemetics Department, University of Illinois
This is a program for`the creation and modification of geometrical objects such as lines, conic sections and graphs of functions. After creating the geometrical object, the user can then apply transformations (rotations, involutions, etc.). The program accepts a mathematical syntax for the equations to be described as well as all BASIC functions.
none;open-ended;college/university students

MATH. FOR COMMUNITY COLLEGES AND ADULT EDUCATION (mathcc;1976;unpublished)
Community College Math. Group
Computer-based Edcuation Research Lab., Univ. of Ill.
The program is the index program for a series of lessons written for Community Colleges and Adult Education under a grant from the National Science Foundation. Lessons are available in Arithmetic, Algebra and Graphing, Geometry, Measurement and Trigonometry, and Probability.
none;variable;community college and adult education students

Geotropism

PLANT RESPONSES AND APICAL DOMINANCE (lcyc;1973;unpublished)
Noell, John; Manteuffel, Mary
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanisms of plant responses to light and gravity and describes hormonal control of apical dominance.
none;30-40 minutes;college/university students

German language--Writing

RUNES (futhark;1978;unpublished)
Hinton, Norman
Sangamon State University
The lesson describes Runes, common German writing systems used in Northern Europe between the 3rd and 13th centuries. It contains lists of characters with their meanings and passages of literature, prose and poetry, written with the runic characters.
none;10-15 minutes;high school, college, university graduate students

Germination

INTRODUCTION TO SEED GERMINATION (morphogen;1973;1980)
Wolniak, Steven; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the processes of seed germination and dormancy and defines the optimum conditions for seed germination.
none;30-40 minutes;college/university students

Glaucoma

GLAUCOMA (bazzoon;1978;unpublished)
Farney, Thomas L; Lee, Tom Jer-Fu
Southern Illinois University School of Medicine
This lesson consists of eleven sections which allow the student to learn about the anatomy and physiology of glaucoma, selectively review aspects of the disease process, and assess his/her knowledge of relevant autonomic pharmacology.
none;open-ended;first year medical students

Globulin

ANTIGLOBULIN TESTING FOR MEDICAL TECHNOLOGISTS (allisonwk;1976;unpublished)
Allison, Linda
Decatur Memorial Hospital, Decatur, Illinois
This lesson provides information about some of the important clinical uses for the antiglobulin test and some of the reasons for obtaining false results.
none;none;students of medical technology, medical students

Glossaries (PLATO)

GLOSSARY (glossary;1977;1979)
Copland, Bruce C
Comp.-based Educ. Res. Lab., U of I, Urbana
This utility lesson provides a table driven glossary "use"-able by any other lesson.
none;open-ended;PLATO lesson authors

Glycolysis

CARBOHYDRATE METABOLISM III: GALACTOSE, FRUCTOSE, MANNOSE (mcatsug;1976;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews glycolysis/gluconeogenesis and then covers the catabolism of the sugars, galactose, fructose, mannose, and of glycerol. For each compound there is a short textual discussion, question/answer section and a drill over names of enzymes and metabolites.
none;45 minutes;first year medical students

CARBOHYDRATE METABOLISM II: GLUCONEOGENESIS (mgluneo;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews glycolysis, compares and contrasts glycolysis and gluconeogenesis, describes the reactions unique to gluconeogenesis, drills the names of metabolites and enzymes, and provides a quiz over all.
none;55 minutes;first year medical students

CARBOHYDRATE METABOLISM IV: CONTROL OF CARBOHYD. METABOLISM (mcarbcon;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson deals with the control processes of the glycolytic and gluconeogenic pathways. It has two sections of questions, the first covering the ways in which various allosteric modifiers affect these pathways, and the second covering the means by which the enzymes of these pathways are controlled.
optional touch panel;none;first year medical students

CARBOHYDRATE METABOLISM I: GLYCOLYSIS (mglyco;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents the glycolytic pathway from glucose through pyruvate, with a drill at the end.
none;20 minutes;first year medical students

RESPIRATION AND ENZYMES (respir;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the general scheme of glycolysis, Krebs cycle and electron transport. It also helps the student to understand the relationship of glycolysis to aerobic respiration.
none;45 minutes;college/university students

Goniometry

CONSTRUCTION OF A GNOMONIC PROJECTION (gnocel;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
The seventh crystallography lesson allows the student to construct a gnomonic projection including any crystal planes he choses. The projection can be compared with that made from data from a crystal measured with the optical goniometer (Lesson VI). The lesson is a valuable exercise in visualizing the orientation of the axes and planes of crystals.
none;none;college and university undergraduate and graduate students

INTRODUCTION TO THE GNOMONIC PROJECTION (gnompr;1977;unpublished)
Curtin, David Y
Chemistry Dept., U. of Illinois, Urbana IL
The lesson, fifth in the Crystallography series, introduces the gnomonic projection as a method of visualizing the three-dimensional arrangement of vectors and planes.
none;none;college and university undergraduate and graduate students

THE METRIC TENSOR (metens;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
The lesson, number four in the Elementary Crystallography course, describes the metric tensor and its use in the calculation of bond angles, bond distances, and other geometrical relationships. The lesson ends by turning the PLATO computer into a calculator which uses matrix algebra to make geometric calculations in a general crystallographic system.
none;none;college and university undergraduate and graduate students

USE OF THE OPTICAL GONIOMETER (goniom;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
The sixth crystallography lesson instructs in the measurement of the angles between the faces of a crystal with a two-circle goniometer, presenting the results as a gnonomic projection. A working simulation of a goniometer allows measurement of the angles between faces of a simulated crystal, showing the collected data as a gnomonic projection.
none;none;college and university undergraduate and graduate students

Gonorrhea

THE MICROBIAL BASIS OF VENEREAL DISEASE (veedx;1976;unpublished)
Ehrhardt, Melvin E
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides an introduction to the identification of venereal diseases, including definitions of syphilis, gonorrhea, lymphogranuloma venereum, chancroid and Donovaniasis. Symptoms, signs, manifestations, and diagnostic tests are covered along with preventative treatment for syphilis.
optional microfiche;none;medical students

Grain trade--Mathematical models

WORLD GRAIN TRADE MODEL (fmaps;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using world grain trade variables can be graphed. A list of available regions is provided and the variables and parameters can be changed in each projection.
none;open-ended;for persons studying populations

Granuloma venereum

THE MICROBIAL BASIS OF VENEREAL DISEASE (veedx;1976;unpublished)
Ehrhardt, Melvin E
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides an introduction to the identification of venereal diseases, including definitions of syphilis, gonorrhea, lymphogranuloma venereum, chancroid and Donovaniasis. Symptoms, signs, manifestations, and diagnostic tests are covered along with preventative treatment for syphilis.
optional microfiche;none;medical students

Graphic methods

CLOSEUP (closeup;1976;1977)
Schreiner, Axel T
Mathematics Department, University of Illinois
This is a program for the simulation of various approximation methods and provides a general plotting capability for functions and straight lines.
none;open-ended;college/university students

GRAFIT PROGRAMMING FACILITY (grafit;1971;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
GRAFIT is a programmable calculator which graphs the results. The program provides a simple programming language with inherent graphical output, designed to assist science students to compute and graph results for small calculations. The program is a general service type program, not a lesson.
none;open-ended;college/university science students

GRAPHICS (graphics;1976;1977)
Schreiner, Axel T
Mathemetics Department, University of Illinois
This is a program for the creation and modification of geometrical objects such as lines, conic sections and graphs of functions. After creating the geometrical object, the user can then apply transformations (rotations, involutions, etc.). The program accepts a mathematical syntax for the equations to be described as well as all BASIC functions.
none;open-ended;college/university students

MULTCHAR (multchar;1976;1979)
Lekas, Anthony; Gutfreund, Steven
Computer Science Department, U of I
This lesson presents a new way for PLATO lesson authors to design large arrays of characters.
none;open-ended;lesson authors

ROSE (rose;1976;1978)
Sleator, Daniel; Sleator, Tycho
University of Illinois
The first three sections of this lesson generate rose patterns. The final four sections are games: Conway's Game of Life; X,Y Equation Solver Game; Morse Battle Game; Brain-o-Battle.
none;open-ended;none

TECHNIQUES OF IN-LINE ANIMATION (animation;1976;1978)
Parrello, Bruce
University of Illinois
This lesson is an introduction to in-line (as opposed to hard-coded) animation.
none;open-ended;computer programmers

THREE DIMENSIONAL SPACE SURFACE PLOTTER (warp;1979;unpublished)
Lasker, Jeffrey M
University of Connecticut

This lesson projects any segmented function in simulated three-dimensional space. The three-dimensional image is simulated by describing the point of view of the observer with respect to the segmented function in space. Detailed help is included.

none;open-ended;general

Graphics
see Computer graphics

Graphs
see Graphic methods

Gravitation

GRAVITATIONAL POTENTIAL ENERGY (gravpot;1978;unpublished)
Beece, Daniel
Dept. of Physics, U of I, Urbana, Ill.

The purpose of this lesson is to provide an introduction to gravitational potential energy. It assumes that the student is familiar with the concepts of force and acceleration, and the Work-Energy equation.

touch panel;none;college/university students

ORBITS (orbits2;1974;unpublished)
Bennett, Carol D; Kane, Dennis
Physics Department, University of Illinois, Urbana

The lesson presents two-dimensional orbit equations and numerical two-dimensional kinematics. Vectors are defined and their proper notation discussed, as well as gravitational acceleration. The procedures are explained and the equations can be plotted.

none;none;physics students

ORBITS PLOTTER (orbits;1974;unpublished)
Bennett, Carol D; Kane, Dennis
Physics Department, University of Illinois, Urbana

The program plots satellite orbits for one or two force centers (earths). The student is guided through a sample case, then given a list of options for changing parameters or setting up a new system.

none;none;physics students

TWO-DIMENSIONAL KINEMATICS (kinem3;1975;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson introduces and tests the basic concepts of vector displacement, velocity, average velocity, and acceleration. Various applications deal with kicking a football. Circular motion is also treated, including a derivation of the radial acceleration v^2/r. Applications include satellite motion. A mastery quiz ends the lesson.
none;170 minutes;college/university students in introductory physics

Grignard reagents
ORGANOMETALLIC CHEMISTRY (orgmet;1976;1978)
Wiegers, Karl
Chemistry Dept., Univ. of Illinois, Urbana, Ill.
The lesson discusses the structure, preparation and reactions of several classes of organometallic compounds.
none;none;college or university students of organic chemistry

Group records
PLATO
GROUP RECORDS PRINTING UTILITY (groupprint;1978;unpublished)
Vollmer, Michael S
Language Learning Laboratory, University of Illinois
This program formats group records information into a dataset or nameset, provided by the group director, for printing. The information which may be recorded includes lesson scores, completion data, rosters, statistics, router and student variables.
none;open-ended;PLATO group directors

Growth promoting substances
ENZYME-HORMONE INTERACTIONS (botony;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson helps the student to understand the relationship of enzymes and hormones, to determine the effect of IAA and GA on the growth form of Alaska and Dwarf peas, and to find the specific activity of IAA oxidase.
none;20-40 minutes;college/university students

Growth (Plants)
ENZYME-HORMONE INTERACTIONS (botony;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson helps the student to understand the relationship of enzymes and hormones, to determine the effect of IAA and GA on the growth form of Alaska and Dwarf peas, and to find the specific activity of IAA oxidase.
none;20-40 minutes;college/university students

EXPERIMENTS IN PHOTOSYNTHESIS (photosyn2;1975;1980)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson aids the student in identifying, by various experimental procedures, environmental factors which affect photosynthesis. The student also learns to interpret data obtained from simulated experiments.
none;20 minutes;college/university students

INTRODUCTION TO SEED GERMINATION (morphogen;1973;1980)
Wolniak, Steven; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the processes of seed germination and dormancy and defines the optimum conditions for seed germination.
none;30-40 minutes;college/university students

PLANT GROWTH (botc;1973;unpublished)
Manteuffel, Mary; Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson explains the stages of stigmoid growth curve and evaluates the results of the student growth experiments with corn, beans and peas.
none;20-30 minutes;college/university students

PLANT RESPONSES AND APICAL DOMINANCE (lcyc;1973;unpublished)
Noell, John; Manteuffel, Mary
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanisms of plant responses to light and gravity and describes hormonal control of apical dominance.
none;30-40 minutes;college/university students

POPULATIONS LABORATORY USING E. COLI (pop;1974;1980)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson describes how populations grow and identifies factors affecting the growth of bacterial populations.
none;15-25 minutes;college/university students

Gymnosperms

PLANT LIFE CYCLES (cycles;1974;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson constructs a diagram of a generalized plant life cycle, discusses the relationship between gametophyte and sporophyte generations and illustrates how this relationship differs throughout the plant kingdom, with special emphasis on its evolutionary significance.
microfiche;90 minutes;college/university students

Hallucinogenic drugs

CNS PHARMACOLOGY: STIMULANTS AND HALLUCINOGENS (kumc22;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents material on hallucinogenic agents and central nervous system stimulants.
none;10 minutes;first year medical students

Halogenation

FREE RADICAL HALOGENATION REACTIONS (radical;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson illustrates the mechanism of free radical chlorination and bromination of alkanes and shows how to calculate the heats of reactions from bond energies.
none;57 minutes;college/university students

Halogens

DETERMINATION OF THE ACTIVITY OF THE HALOGENS (halogen;1977;unpublished)
Moore, Carolynn
Dept. of Chemistry, Univ. of Illinois, Urbana, IL
The lesson discusses the activity of the halogen elements. A simulation is given of the laboratory determination of the relative activity of the halogens.
none;none;college and university students of general chemistry

Halothane

CNS PHARMACOLOGY: GENERAL ANESTHESIA (kumc29;1975;unpublished)
Kansas University Medical Center; Nelson, S; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson covers the general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

Hand signals

Music

HAND SIGNALS - SOLMIZATION (emus2;1976;1977)
Flohr, John W
Music Department, U of Illinois, Urbana IL
This music lesson is designed to teach the use of hand signals as a visual aid in the development of singing. Solmization is the term for systems which designate the notes in a scale by syllables.
none;none;college/university

Harmonic motion

Simple

OSCILLATIONS (oscill;1974;1977)

Sherwood, Bruce Arne

Physics Department, University of Illinois

Basic concepts of amplitude, period and frequency are introduced in this lesson in connection with a calculable anharmonic oscillator (two inclines facing each other). A spring-mass system is treated by analogy with circular motion, and by optional calculus treatment. Also included are experimental simulations and other applications.

none;110 minutes;college/university students of introductory physics

Head

ANATOMY QUIZ: THE HEAD (anaquiz1;1976;unpublished)

Kahn, Madelyn I; Gaburo, K

School of Basic Medical Sciences, Univ. of Illinois

This lesson features six separate areas - each area presenting questions in a different format (e.g., multiple choice or sequencing). The content includes arteries and veins, nerves and plexuses, muscles and ligaments, bony markings, sinuses and eyeball muscles. Student's score on the quiz is presented and evaluated.

none;15 minutes;first year medical students

Headache

PHYSICIAN SELF-ASSESSMENT I (psa01;1976;unpublished)

Lackmann, John; Bloomfield, Louis; Kaufman, S.

Abraham Lincoln Medical School, Univ. of Illinois

In this lesson, the patient presents the student with a problem of occipital headaches. The student must make a series of decisions on how to diagnose and treat the problem. Each decision is scored and real data is presented, including clinical pictures through the use of microfiche.

microfiche, optional touch panel;none;medical students

Heart

see also Cardiology

THE CARDIAC CYCLE (pcg;1974;1978)

Smetzer, David L; Martin, G S; Koehn, Charles E

College of Veterinary Medicine, Univ. of Illinois

The lesson presents information for the study of the heart beat with regard to electrical events, hemodynamic events and acoustic events. On completion of the lesson the student should be able to specify what events are occurring in the cardiac cycle when a specific event is given.

none;2 hours;professonal students of veterinary medicine

THE CARDIAC CYCLE PT. II: PHYS. PARAM. OF THE CARDIAC CYCLE
(heartcyc12;1975;unpublished)
Frasher, Wallace G; Rikel, James E
University of Southern California
This lesson continues the discussion begun in part one of "The Cardiac Cycle" with emphasis on the physical parameters of the cycle.
none;15 minutes;first year medical students

THE CARDIAC CYCLE PT. I: DIR. OF FLOW & BASIC CARD. ANATOMY
(heartcyc11;1975;unpublished)
Frasher, Wallace G; Rikel, James E
University of Southern California
This lesson discusses the relationship of the mechanical functions performed by the heart to the sequential events of the cardiac cycle and blood propulsion. The student should be able, upon completion, to reproduce the cardiac cycle diagram, and recall and properly locate any anatomical structure mentioned in this lesson.
none;15 minutes;first year medical students

CONGENITAL CARDIAC DEFECTS (cardianom;1977;unpublished)
Choate, B. Paul; McCraw, Gordon W; Sharpe, George
Oklahoma University Health Sciences Center
This lesson is concerned with the clinical and pathological aspects of various congenital cardiac defects. It also covers the development and etiology of such defects. Some of the defects covered are ventriculo-septal defects, transposition of vessels, valvular and combinations defects.
optional touch panel;30 minutes;first year medical students

INTERPRETATION OF EKG (cardiol;1977;unpublished)
Flanders, Samuel J
Peoria School of Medicine, University of Illinois
In this lesson the student is given a basic introduction to the use of electrocardiograms in physical diagnosis, including how they are made and how to read them.
none;none;first year medical students

INTRO. TO THE ELECTRICAL ACTIVITY OF MYOCARDIAL TISSUE: EKG
(elcardio;1976;unpublished)
Frasher, Wallace G; Rikel, James E
University of Southern California
This lesson discusses how cellular events combine in the heart to produce a regulated sequence of muscular contractions and how electrical activity in the excitation process produces a signal at the surface of the body which permits recording and electrocardiogram.
none;15 minutes;first year medical students

Heart failure

EMERGENCY MEDICINE: CARDIAC ARREST (arrest;1977;unpublished)
Winterhalter, Joseph D; Bonetti, William
U of I Medical School, Cntr. for Ed. Development

In this lesson simulation, a stocky white middle-aged female is wheeled into the emergency room on a gurney. One attendant compresses the patient's chest as the other holds an oxygen mask over her mouth. The student is called upon to make a series of decisions concerning the management of this patient.

microfiche;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: WEAKNESS (feinz6;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois

In this simulation the patient is a 70-year-old woman who in the last three weeks has gained weight and felt generalized weakness. The user is a student physician working for an ambulatory care facility who has been assigned to this woman. Choices are made from options provided and each selection is discussed.

none;none;medical students

Heart--Abnormities and deformities

CONGENITAL CARDIAC DEFECTS (cardianom;1977;unpublished)
Choate, B. Paul; McCraw, Gordon W; Sharpe, George
Oklahoma University Health Sciences Center

This lesson is concerned with the clinical and pathological aspects of various congenital cardiac defects. It also covers the development and etiology of such defects. Some of the defects covered are ventriculo-septal defects, transposition of vessels, valvular and combinations defects.

optional touch panel;30 minutes;first year medical students

CONGENITAL DEFECTS OF THE HEART AND GREAT VESSELS (pedcard;1977;unpublished)
Green, Michael; Sliwa, W. Gerard
School of Basic Medical Science, Univ. of Illinois

This lesson presents basic physiology and key clinical signs of major congenital defects of the heart and great vessels.

none;none;first year medical students

Heart--Muscle

INTERPRETATION OF EKG (cardiol;1977;unpublished)
Flanders, Samuel J
Peoria School of Medicine, University of Illinois

In this lesson the student is given a basic introduction to the use of electrocardiograms in physical diagnosis, including how they are made and how to read them.

none;none;first year medical students

INTRO. TO THE ELECTRICAL ACTIVITY OF MYOCARDIAL TISSUE: EKG (elcardio;1976;unpublished)
Frasher, Wallace G; Rikel, James E
University of Southern California
This lesson discusses how cellular events combine in the heart to produce a regulated sequence of muscular contractions and how electrical activity in the excitation process produces a signal at the surface of the body which permits recording and electrocardiogram.
none;15 minutes;first year medical students

Heart--Palpitation

THE TREATMENT OF CARDIAC ARRHYTHMIAS (kumc5;1975;unpublished)
Kansas University Medical Center; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois
This lesson discusses naturally occurring and digitalis-induced arrhythmias and the drugs used for treatment.
none;15 minutes;first year medical students

Heart--Terminology

see also Cardiology--Terminology

ELECTROCARDIOGRAPHY (ekg0;1974;1978)
Smetzer, David L; Koehn, Charles E
College of Veterinary Medicine, University of Illinois
The lesson describes by animated graphics the sequence of spread of electrical activity through the normal heart and relates the spread of electrical activity to the genesis of the electrocardiogram. The lesson is non-interactive ss far as the student is concerned.
none;one hour;students of veterinary medicine

Heisenberg uncertainty principle

THE HEISENBERG UNCERTAINTY PRINCIPLE (heisenberg;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
The lesson gives practice in exercises on wave packets and the Heisenberg Uncertainty Principle. Definitions, notation, comments and hints for the exercises and subsequent analysis are included.
none;none;college/university students

Hematology

ANTIGLOBULIN TESTING FOR MEDICAL TECHNOLOGISTS (allisonwk;1976;unpublished)
Allison, Linda
Decatur Memorial Hospital, Decatur, Illinois
This lesson provides information about some of the important clinical uses for the antiglobulin test and some of the reasons for obtaining false results.
none;none;students of medical technology, medical students

BLOOD GROUP SYSTEMS OTHER THAN ABO AND Rh (hemcarle1;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson provides clinically significant information on some of the more important blood group systems other than the ABO and Rh systems.
none;none;laboratory technology students, medical students

CASE STUDIES IN COAGULATION II: THE GIRL IN THE DORM (coag2;1976;unpublished)
Rodriguez-Erdmann, Franz; Bonetti, William
Abraham Lincoln Medical School, Univ. of Illinois
This lesson simulates a doctor being called to a college dormitory to see an 18-year-old female because she has been feeling ill for a few days. Her complaints are a cold, blurred vision and a rash. The student must diagnose and recommend treatment for the patient.
none;none;medical students

CASE STUDIES IN COAGULATION I: THE STREET FIGHT (coag1;1976;unpublished)
Rodriguez-Erdmann, Franz; Bonetti, William
Abraham Lincoln Medical School, Univ. of Illinois
This lesson presents questions and answers dealing with a case of hemophilia in a 19-year-old male. Lesson asks questions concerning proper procedure in the workup and management of the patient and specific questions concerning lab tests and questions about hemophilia and von Willebrand's disease.
none;15 minutes;medical students

HEMOGLOBIN DETERMIN. USING THE KLETT-SUMMERSON COLORIMETER (mcmikewk;1978;unpublished)
McMichael, Joseph L
School of Medicine, Univ. of Maryland, Baltimore
This lesson deals with hemoglobin determination using the Klett. It has three parts: 1) description of the Klett, b) procedure of usage, and c) post-test. A labeled diagram of the Klett is presented with a description of the function of its parts. The procedure explains how the Klett is used, and the post-test requires calculation by the student.
none;none;students of medical technology, medical students

LAB. TECH. VIEW OF HEMOLYTIC DISEASE OF THE NEWBORN (bbcarle3;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson for medical technology students specializing in blood banking covers the causes, means of prediction, diagnosis and treatment of hemolytic disease of the newborn.
none;none;medical technology students, medical students

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TRANSFUSION THERAPY III: THROMBOCYTOPENIA, EVAL. AND TREAT.
(thrombo;1978;unpublished)
Burton, Timothy; Siegel, Eliot; Dawson, R. Ben
School of Medicine, Univ. of Maryland, Baltimore

This two-part lesson is third in a series of transfusion therapy lessons, and describes the clinical presentation and laboratory evaluation of thrombocytopenia. The second half of the program discusses immunological causes, with emphasis on diagnosis and treatment. Quizzes follow major topics in the lesson.

none;40 minutes;medical students

TRANSFUSION THERAPY II:PLATELETS AND PLASMA COMP. (bend2;1978;unpublished)
Dawson, R. Ben; Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore

This lesson is second in the series of transfusion therapy lessons. It deals with platelets and plasma clotting factors.

none;20-30 minutes;medical students

TRANSFUSION THERAPY I: INTRO., RBC TRANSFUSIONS, & REACTIONS
(bend;1978;unpublished)
Dawson, R. Ben; Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore

This lesson is the first in a series to acquaint the student with the basics of blood transfusion therapy. It presents the material through an interactional format, where the student is asked to manage a clinical case, and is questioned along the way.

none;none;medical students

Hematology--Examinations, questions, etc.

ANTIGLOBULIN TESTING FOR MEDICAL TECHNOLOGISTS (allisonwk;1976;unpublished)
Allison, Linda
Decatur Memorial Hospital, Decatur, Illinois

This lesson provides information about some of the important clinical uses for the antiglobulin test and some of the reasons for obtaining false results.

none;none;students of medical technology, medical students

BLOOD GROUP SYSTEMS OTHER THAN ABO AND Rh (hemcarle1;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois

This lesson provides clinically significant information on some of the more important blood group systems other than the ABO and Rh systems.

none;none;laboratory technology students, medical students

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CASE STUDIES IN COAGULATION II: THE GIRL IN THE DORM (coag2;1976;unpublished)
Rodriguez-Erdmann, Franz; Bonetti, William
Abraham Lincoln Medical School, Univ. of Illinois

This lesson simulates a doctor being called to a college dormitory to see an 18-year-old female because she has been feeling ill for a few days. Her complaints are a cold, blurred vision and a rash. The student must diagnose and recommend treatment for the patient.

none;none;medical students

CASE STUDIES IN COAGULATION I: THE STREET FIGHT (coag1;1976;unpublished)
Rodriguez-Erdmann, Franz; Bonetti, William
Abraham Lincoln Medical School, Univ. of Illinois

This lesson presents questions and answers dealing with a case of hemophilia in a 19-year-old male. Lesson asks questions concerning proper procedure in the workup and management of the patient and specific questions concerning lab tests and questions about hemophilia and von Willebrand's disease.

none;15 minutes;medical students

HEMOGLOBIN DETERMIN. USING THE KLETT-SUMMERSON COLORIMETER (mcmikewk;1978;unpublished)
McMichael, Joseph L
School of Medicine, Univ. of Maryland, Baltimore

This lesson deals with hemoglobin determination using the Klett. It has three parts: 1) description of the Klett, b) procedure of usage, and c) post-test. A labeled diagram of the Klett is presented with a description of the function of its parts. The procedure explains how the Klett is used, and the post-test requires calculation by the student.

none;none;students of medical technology, medical students

LAB. TECH. VIEW OF HEMOLYTIC DISEASE OF THE NEWBORN (bbcarle3;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois

This lesson for medical technology students specializing in blood banking covers the causes, means of prediction, diagnosis and treatment of hemolytic disease of the newborn.

none;none;medical technology students, medical students

TRANSFUSION THERAPY III: THROMBOCYTOPENIA, EVAL. AND TREAT. (thrombo;1978;unpublished)
Burton, Timothy; Siegel, Eliot; Dawson, R. Ben
School of Medicine, Univ. of Maryland, Baltimore

This two-part lesson is third in a series of transfusion therapy lessons, and describes the clinical presentation and laboratory evaluation of thrombocytopenia. The second half of the program discusses immunological causes, with emphasis on diagnosis and treatment. Quizzes follow major topics in the lesson.

none;40 minutes;medical students

TRANSFUSION THERAPY II:PLATELETS AND PLASMA COMP. (bend2;1978;unpublished)
Dawson, R. Ben; Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore
This lesson is second in the series of transfusion therapy lessons. It deals with platelets and plasma clotting factors.
none;20-30 minutes;medical students

TRANSFUSION THERAPY I: INTRO., RBC TRANSFUSIONS, & REACTIONS (bend;1978;unpublished)
Dawson, R. Ben; Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore
This lesson is the first in a series to acquaint the student with the basics of blood transfusion therapy. It presents the material through an interactional format, where the student is asked to manage a clinical case, and is questioned along the way.
none;none;medical students

Heme

OXYGEN TRANSPORT BY HEMOGLOBIN (oth;1977;unpublished)
Bucci, Enrico; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore
This simulation program illustrates the overall affinity of hemoglobin for oxygen, the heme-heme interaction, the oxygen saturation curve and the Hill equation. The user can manipulate the parameters and see how the changes affect the oxygen saturation curve and amount of oxygen delivered to the tissues.
none;none;first year medical students

THE STRUCTURE OF HEMOGLOBIN AND MYOGLOBIN (hemocopy;1976;unpublished)
Bucci, Enrico; Bender, Jeffrey; Faith, Gregory; et al.
School of Medicine, Univ. of Maryland, Baltimore
This lesson presents the basic structural components of the oxygen-carrying protein in man. The quaternary structure of hemoglobin and the most important conformational changes that are produced by oxygenation are represented graphically.
none;15 minutes;first year medical students

Hemoglobin

GAS TRANSPORT IN BLOOD (shp89;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas
This lesson focuses on the normal transport of respiratory gases in the blood.
none;2 hours;physicians' assistants

HEMOGLOBIN DETERMIN. USING THE KLETT-SUMMERSON COLORIMETER (mcmikewk;1978;unpublished)
McMichael, Joseph L
School of Medicine, Univ. of Maryland, Baltimore
This lesson deals with hemoglobin determination using the Klett. It has three parts: 1) description of the Klett, b) procedure of usage, and c) post-test. A labeled diagram of the Klett is presented with a description of the function of its parts. The procedure explains how the Klett is used, and the post-test requires calculation by the student.
none;none;students of medical technology, medical students

HUMAN HEMOGLOBIN INTERACTION WITH POLYPHOSPHATES (hemodpg;1977;unpublished)
McDiarmid, Melissa A; Bucci, Enrico; Ryker, Martha
School of Medicine, Univ. of Maryland, Baltimore
This lesson deals with the stereochemistry of the binding of 2,3DPG (2,3-diphosphoglycerate) to human hemoglobin and with the simulations of oxygen transport in the presence of varying oxygen pressures at the lungs and varying amounts of 2,3DPG inside the red cells.
none;none;first year medical students

OXYGEN TRANSPORT BY HEMOGLOBIN (oth;1977;unpublished)
Bucci, Enrico; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore
This simulation program illustrates the overall affinity of hemoglobin for oxygen, the heme-heme interaction, the oxygen saturation curve and the Hill equation. The user can manipulate the parameters and see how the changes affect the oxygen saturation curve and amount of oxygen delivered to the tissues.
none;none;first year medical students

THE STRUCTURE OF HEMOGLOBIN AND MYOGLOBIN (hemocopy;1976;unpublished)
Bucci, Enrico; Bender, Jeffrey; Faith, Gregory; et al.
School of Medicine, Univ. of Maryland, Baltimore
This lesson presents the basic structural components of the oxygen-carrying protein in man. The quaternary structure of hemoglobin and the most important conformational changes that are produced by oxygenation are represented graphically.
none;15 minutes;first year medical students

Hemolytic anemia

LAB. TECH. VIEW OF HEMOLYTIC DISEASE OF THE NEWBORN (bbcarle3;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson for medical technology students specializing in blood banking covers the causes, means of prediction, diagnosis and treatment of hemolytic disease of the newborn.
none;none;medical technology students, medical students

Hemophilia

CASE STUDIES IN COAGULATION I: THE STREET FIGHT (coagl;1976;unpublished)
Rodriguez-Erdmann, Franz; Bonetti, William
Abraham Lincoln Medical School, Univ. of Illinois

This lesson presents questions and answers dealing with a case of hemophilia in a 19-year-old male. Lesson asks questions concerning proper procedure in the workup and management of the patient and specific questions concerning lab tests and questions about hemophilia and von Willebrand's disease.

none;15 minutes;medical students

Hemoproteins

THE STRUCTURE OF HEMOGLOBIN AND MYOGLOBIN (hemocopy;1976;unpublished)
Bucci, Enrico; Bender, Jeffrey; Faith, Gregory; et al.
School of Medicine, Univ. of Maryland, Baltimore

This lesson presents the basic structural components of the oxygen-carrying protein in man. The quaternary structure of hemoglobin and the most important conformational changes that are produced by oxygenation are represented graphically.

none;15 minutes;first year medical students

Heraldry

HERALDRY (heraldry;1978;unpublished)
Banks, Fred; Dillier, Norman; Dionesotes, Dean
University of Illinois, Urbana, Illinois

Heraldry is the feudal art of symbolism for both personal and family identification. This program deals with the basics of "heraldic" design and terminology as applied to the shield. A bibliography of books on the subject is also included in the lesson.

touch panel;none;general audience

Heredity

DROSPHILIA GENETICS (cfly;1968;unpublished)
Hyatt, Gary; Eades, David C; Tenczar, Paul J; et al.
Comp.-based Educ. Res. Lab., Univ. of Illinois

This lesson contains simple lab exercises in fruit fly genetics, simulated through graphic depiction of inherited characteristics to show the dominant traits of the parents. The student selects parents to mate, and through randomized permutations of the inherited traits according to genetic laws, the offspring are depicted.

none;open-ended;college/university students

GENETIC RISK ESTIMATES (genrisk;1977;unpublished)
Daniel, William; Brenner, Lisa; Schultz, Stephen
School of Basic Medical Sciences, Univ. of Illinois

This lesson teaches the student to calculate genetic risks for single factor traits, to define prior and posterior probabilities, to calculate these probabilities using family history data and to interpret the risk figures to a layman. Pre- and post-tests are included.

none;none;first year medical students

GENETICS AND HEREDITY (genet;1978;unpublished)
Baillie, Robert; Hyatt, Gary; Noell, John
Department of Botany, U of I, Urbana, Ill.
This lesson treats genetics and heredity through discussion and illustration of Mendel's Laws.
none;20 minutes;college/university students

MEDICAL GENETICS LABORATORY: METABOLIC DISEASES AND MEDICINE (genlab;1977;unpublished)
Li, I-Chian; Daniel, William; Brenner, Lisa; et al.
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents two patients, each with a metabolic disease. The student is provided with clinical, laboratory and family data and is requested to diagnose the specific disorder, provide a description of the molecular basis of the disease and provide recurrence risks. Branch pathways are provided to permit actual lab experience or test results.
microfiche;open-ended;first year medical students

PEDIGREES: READING AND WRITING THEM (pedigree;1975;unpublished)
Chirolas, Darlene
School of Basic Medical Sciences, Univ. of Illinois
This lesson explains the symbols and terms used in constructing a pedigree and provides a step-by-step guide to building a pedigree. Matching and identification questions reinforce the meanings of the pedigree symbols. Questions about sample pedigrees provide extra drill.
none;15 minutes;first year medical students

PROBABILITY AND HEREDITY (proba;1977;1978)
Baillie, Robert; Hyatt, Gary
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson defines probability, demonstrates Mendel's laws, and gives the student some practice with probabiltiy problems and genetic crosses.
none;40-50 minutes;college/university students

Hexadecimal system

COMPUTER NUMBERS (numbers;1975;unpublished)
Strass, Gregory; Montanelli, Richard; Friedman, H. George
Computer Science Dept., University of Illinois
This lesson is designed primarily for teaching about computers such as the IBM System/360/370 series, with which hexadecimal numbers are useful. The discussion of storage of integer and real numbers is specifically 360/370 oriented. The lesson can be set up to instruct in either octal or hexadecimal numbers or both.
none;none;instructors and students of computer science

High school teachers tenure

TENURE: A SIMULATION OF A FIRST YEAR OF TEACHING (tenure;1975;unpublished)
Gaede, Owen F
College of Education, U. of Illinois, Urbana IL

This is a simulation of a first year of teaching. The user must make decisions similar to those of a first year teacher in order to attain tenure and a salary increase.

none;30 minutes to 2 hours;secondary education teacher training

Histamine

HISTAMINE AND ANTIHISTAMINES (shp111;1975;unpublished)
Gage, William V
Sheppard Air Force Base, Texas

This lesson presents information about the definition, formation, release, pharmacology and physiology of histamines, and the mechanism of action, pharmacology, therapeutic uses and side effects of antihistamines. Decongestants are discussed in relation to allergic rhinitis.

none;2 hours;physicians' assistants

Histology

HISTOLOGY - EPITHELIUM (etisl;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson teaches beginning students the fundamentals of epithelial characteristics, identification and classification. Junctional complexes and and cell surface specializations are included. Color photomicrographs of tissues and PLATO graphics, combined with extensive interactive feedback are featured. There is a pre-test and a post-test.

microfiche;none;first year medical students

INTRODUCTION TO PLATO HISTOLOGY (beghis;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson is composed of two subunits. The first introduces the student to the subject of histology - defining "histology" and "tissue." An attempt is made to motivate the student toward studying the tissues. The second section describes the methods for using the "microfiche system" in the PLATO histology lessons.

microfiche;20 minutes;first year medical students

Histology--Examinations, questions, etc.

CUTTHROAT HISTOLOGY: COMPETITITIVE INTERTERM. DRILL (cuthis;1976;unpublished)
McCormick, R; Gaburo, K
Basic School of Medical Sciences, Univ. of Illinois

This lesson features the identification of tissues and organs from over 200 photomicrographs on microfiche. A series of questions, related to that photomicrograph, are presented for the student to answer as fast and as accurately as possible. The student may challenge another student or match wits with PLATO. The photomicrographs and questions may be reviewed.

microfiche;open-ended;first year medical students

HISTOLOGY - EPITHELIUM (etisl;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
This lesson teaches beginning students the fundamentals of epithelial characteristics, identification and classification. Junctional complexes and and cell surface specializations are included. Color photomicrographs of tissues and PLATO graphics, combined with extensive interactive feedback are featured. There is a pre-test and a post-test.
microfiche;none;first year medical students

Hodgkin's disease

A PAIN IN THE NECK: HARRY JONES COMPLAINS OF THE FLU (lump;1978;unpublished)
Busse, Joel; Graham, Carol; Nelson, Charles D; et al.
University of Illinois Rockford School of Medicine
In this simulation, Harry Jones complains of flu symptoms and a stiff neck. He is a regular patient usually in good health. The student is required to take a complete medical history, gather lab and physical data, and take x-rays. Faulty procedures in the initial workup cause the patient to leave the office for 3 month delay, causing a worsening condition.
optional microfiche;none;medical students

Homonyms

HOMONYM PUZZLE (eng4a;1977;unpublished)
Geaither, Barbara
Malcolm X College, Chicago, Illinois
This lesson reviews homonyms through the use of a crossword puzzle. Crossword puzzle provides a fun approach for reviewing there/their/they're; your/you're; its/it's; and to/too/two.
none;20 minutes;Basic or regular English students

TROUBLESOME HOMONYMS (eng4;1977;unpublished)
Geaither, Barbara
Malcolm X College, Chicago, Illinois
This lesson provides student with explanation and practice in understanding troublesome homonyms. Four sets of homonyms (its/it's; their/there/they're; your/you're; to/too/two) are presented, each with explanation, examples, practice sentences, and exercises. A final test covers all four homonym sets.
none;35 minutes;Basic English students

WORD CONFUSIONS I (lipscomb3;1974;unpublished)
Lipscomb, Delores
University of Illinois, Circle Campus, Chicago, Ill.
This lesson provides the student with information on the usage and spelling differences of several groups of words. Explanations and exercises are presented from which the student must learn how to avoid making simple errors resulting from word confusion.
none;5-10 minutes;Basic English students

WORD CONFUSIONS II (lipscomb6;1974;unpublished)
Lipscomb, Delores
University of Illinois, Circle Campus, Chicago, Ill.

This lesson provides the student with information on the usage and spelling differences of several groups of words. Confusing words covered in this lesson are: all ready/ already; all right/alright; and all together/altogether. Introductory exercises and a closing exam supply practice for the student's usage of the listed words.

none;15 minutes;Basic English students

Hormones

ENDOCRINE PHARMACOLOGY (endopharm2;1976;unpublished)
Kauffman, Frederick; Schwartz, Sandra
School of Medicine, Univ. of Maryland, Baltimore

This lesson reviews hormones and hormone actions, relating actions and uses of drugs to the endocrine system. The major classes of endocrine agents and general sites of action, as well as the major mechanisms of action of these agents, are discussed.

none;10 minutes;first year medical students

HORMONAL CONTROL: CARBOHYDRATE AND LIPID METABOLISM (endo;1978;unpublished)
Jackson, Gary L; Johnson, E. Wayne; Trynda, Richard S
College of Veterinary Medicine, University of Illinois

In this program the user will study the effects of five hormones on the levels of blood glucose and the stimuli for their release, as well as the mechanism of muscle, liver and adipose cell response to the same five hormones. A short quiz is given after each section and a comprehensive quiz may be taken at the end of the lesson.

none;none;students of veterinary medicine

Hormones, Sex

INFLUENCE OF HORMONES ON REPRODUCTION (reprod;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland Col., Champaign, Illinois

This lesson is a part of the series on the process of reproduction designed for nursing students studying maternity nursing. This lesson illustrates the influence of hormones on the process. Charts are used, help sections and a dictionary of terms are available to the students.

none;20 minutes;students of maternity nursing

PHYSIOLOGY OF FEMALE REPRODUCTIVE CYCLE (mnurse8;1975;1978)
Bitzer, Maryann; Boudreaux, Martha; Bitzer, Donald
Mercy Hospital School of Nursing, Urbana, Ill.

This lesson is concerned with the physiology of the female reproductive cycle. The physiological changes which occur during the non-pregnant and pregnant states are discussed, and information concerning hormones being secreted is provided. A set of questions will check the student's understanding of the material.

none;none;nursing students

Hormones (Plants)

ENZYME-HORMONE INTERACTIONS (botony;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson helps the student to understand the relationship of enzymes and hormones, to determine the effect of IAA and GA on the growth form of Alaska and Dwarf peas, and to find the specific activity of IAA oxidase.
none;20-40 minutes;college/university students

PLANT RESPONSES AND APICAL DOMINANCE (1cyc;1973;unpublished)
Noell, John; Manteuffel, Mary
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanisms of plant responses to light and gravity and describes hormonal control of apical dominance.
none;30-40 minutes;college/university students

Hormones--Analysis

IDENTIFICATION OF HORMONE UNKNOWNS (hormo;1974;unpublished)
Jackson, Gary L; Trynda, Richard S
College of Veterinary Medicine, University of Illinois
In this lesson, one hormone will be randomly selected from twenty mammalian hormones stored in the computer, and presented as an unknown. The user is to run tests on the unknown and gather data on its effects on various parameters.
none;none;students of veterinary medicine

Horses

HORSE TALK (equine2;1975;unpublished)
Silver, John; Knobloch, Cheryl P
College of Veterinary Medicine, University of Illinois
This lesson is a drill in the jargon of the stable. It presents 71 terms or phrases describing conformational faults and lamenesses of horses. Quizzes are included for self-assessment.
touch panel;none;students of veterinary medicine

Human embryology

PLACENTAL TRANSFER AND FETAL PHARMACOLOGY (mnurse7;1975;1978)
Bitzer, Maryann; Boudreaux, Martha; Bitzer, Donald
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson illustrates the importance of placental transfer of drugs and disease from mother to fetus, and gives an overview of some present day findings.
none;none;nursing students

Human mechanics

BIOMECHANICS OF RUNNING (pe10;1974;unpublished)
Reece, Robert M; Dillman, Charles J
Physical Education Department, U of I, Urbana, Ill.
This lesson teaches the user to manipulate various parameters which determine the speed at which a sprinter is able to run the 100 meter dash. Background material and definitions are provided.
none;1-2 hours;persons interested in the study of biomechanics

PROJECTILE MOTION IN SPORTS SKILLS (pe1;1974;unpublished)
Reece, Robert M; Dillman, Charles J
Physical Education Department, U of I, Urbana, Ill.
The purpose of this lesson is to illustrate how the manipulation of selected biomechanical factors of human performance can influence the outcome of various projection activities in sport.
none;60 minutes;persons interested in the study of biomechanics

Human reproduction

INFLUENCE OF HORMONES ON REPRODUCTION (reprod;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland Col., Champaign, Illinois
This lesson is a part of the series on the process of reproduction designed for nursing students studying maternity nursing. This lesson illustrates the influence of hormones on the process. Charts are used, help sections and a dictionary of terms are available to the students.
none;20 minutes;students of maternity nursing

PHYSIOLOGY OF FEMALE REPRODUCTIVE CYCLE (mnurse8;1975;1978)
Bitzer, Maryann; Boudreaux, Martha; Bitzer, Donald
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson is concerned with the physiology of the female reproductive cycle. The physiological changes which occur during the non-pregnant and pregnant states are discussed, and information concerning hormones being secreted is provided. A set of questions will check the student's understanding of the material.
none;none;nursing students

Human skeleton

HUMAN SKELETAL SYSTEM: PART I - THE THORAX (skelsys2;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This osteology lesson presents the bones of the thorax. Surfaces, borders and markings of the sternum, costal cartilages, and typical and atypical ribs are illustrated and described. Boundaries of the thoracic inlet and outlet are defined. Directions for palpating subcutaneous parts of these bones are included. There is a post-test.
none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART III - THIGH AND LEG (skelsys3;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thigh and leg. Surfaces, borders and markings of the femur, patella, tibia and fiblua are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART V - SHOULDER GIRDLE (skelsys5;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the shoulder girdle. Surfaces, borders and markings of the clavical and scapula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART VI - THE ARM (skelsys6;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the arm and forearm. The surfaces, borders and markings of the humerus, radius and ulna are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PT.II - PELVIC GIRDLE (skelsys;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This lesson on osteology introduces the student to the bones of the pelvic girdle. Surfaces, borders and markings of the hipbone, sacrum and coccyx are illustrated and identified. The bony landmarks of the pelvic inlet and outlet are identified, as well as characteristics which aid in determining the sex of the pelvis. A post-test is included.

none;20 minutes;first year medical students

THE HUMAN SKELETAL SYSTEM: PT.IV - BONES OF THE FOOT (skelsys4;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This lesson presents the osteology of the bones of the foot. Surfaces and markings of the tarsals, metatarsals and phalanges are illustrated and described. Directions for palpating the structures of these bones which are subcutaneous and readily felt in the living body are included. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

Humerus

HUMAN SKELETAL SYSTEM: PART VI - THE ARM (skelsys6;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This osteology lesson presents the bones of the arm and forearm. The surfaces, borders and markings of the humerus, radius and ulna are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.
none;20 minutes;first year medical students

Hydroboration

ALCOHOLS (roht;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson teaches the common and IUPAC names of alcohols. It discusses the preparation by reduction of C=O, hydration, hydroboration, hydrolysis of HX, and Grignard additions. The reactions included are: oxidation, conversion to RX, dehydration, salt and ether formation.
none;89 minutes;college/university students

Hydrolysis

ALCOHOLS (roht;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson teaches the common and IUPAC names of alcohols. It discusses the preparation by reduction of C=O, hydration, hydroboration, hydrolysis of HX, and Grignard additions. The reactions included are: oxidation, conversion to RX, dehydration, salt and ether formation.
none;89 minutes;college/university students

Hygiene, Public

ANTEMORTEM AND POSTMORTEM INSPECTION PROCEDURES (apip;1974;unpublished)
Grimes, George M; Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois
The purpose of the lesson is to help the student learn how to perform antemortem and postmortem inspections using proper procedures in accordance with the U. S. Department of Agriculture regulations. The student should be able to recognize and prescribe humane slaughter procedures and proper facilities and equipment for making the inspections.
slide selector, microfiche;2 hours;professonal students of veterinary medicine

TRANSMISSION OF ZOONOSES (zdis;1975;1979)
Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois
The lesson discusses the transmission of zoonoses which are diseases transmitted from animals to man.
none;1 hour;professional students of veterinary medicine

VETERINARY PUBLIC HEALTH ASPECTS OF MILK AND DAIRY PRODUCTS (milkp;1974;1978)
Grimes, George M; Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois

The lesson provides a general knowledge of the veterinary public health aspects of defense against disease from milk and dairy products. The various sources of contamination and adulteration are indicated, the defenses appropriate to prevent disease, and the inspection responsibility and authority.

none;2 hours;professional students of veterinary medicine

Hyperbola

EXPERIMENTS WITH HYPERBOLAS (hyper;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.

In this lesson the student is asked to supply a value for the variable in an open sentence. PLATO then graphs the sentence. As many sentences can be graphed as the student chooses; the previous equations and plotted symbols remain on the screen for comparison.

none;open-ended;elementary mathematics students

Hypersensitivity

INHALATIONAL LUNG DISEASES (inhal;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of inhalational lung diseases. Sections on pneumoconiosis, extrinsic allergic alveolitis and chemical pneumonitis are presented. These diseases are characterized by damage to the lungs caused by inhalation of dusts (organic or inorganic), fumes or noxious substances.

optional touch panel;none;first year medical students

Hypertension

CASE HISTORY: MANAGEMENT OF HYPERTENSION (kumc36;1975;unpublished)
Kansas University Medical Center; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois

This lesson simulates the examination, diagnosis and treatment of an hypertensive patient. Discussion of therapeutic agents is provided.

none;15 minutes;first year medical students

Hypertension--Diagnosis

CASE HISTORY: MANAGEMENT OF HYPERTENSION (kumc36;1975;unpublished)
Kansas University Medical Center; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois

This lesson simulates the examination, diagnosis and treatment of an hypertensive patient. Discussion of therapeutic agents is provided.

none;15 minutes;first year medical students

Hyperthyroidism

DRUGS: ADRENAL STEROIDS (kumc43;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson first reviews some diseases of hyper- and hypothyroidism, then discusses the therapeutic use of steroid drugs in their treatment.
none;10 minutes;first year medical students

DRUGS: THYROID AGENTS (kumc49;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson describes and reviews hyper- and hypo- thyroid conditions, treats the function of the thyroid gland, and discusses some thyroid agents and their effect upon the gland.
none;10 minutes;first year medical students

Hypnotics

CNS PHARMACOLOGY: SEDATIVES AND HYPNOTICS (kumc19;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the general chemistry and pharmacology of sedative-hypnotics. Those treated are primarily barbiturates, certain anithistamines, chloral hydrate, ethchlorvynol, glutethamide, methaqualone and other clinically pertinent sedative-hypnotic agents.
none;10 minutes;first year medical students

Hypothyroidism

DRUGS: ADRENAL STEROIDS (kumc43;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson first reviews some diseases of hyper- and hypothyroidism, then discusses the therapeutic use of steroid drugs in their treatment.
none;10 minutes;first year medical students

DRUGS: THYROID AGENTS (kumc49;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson describes and reviews hyper- and hypo- thyroid conditions, treats the function of the thyroid gland, and discusses some thyroid agents and their effect upon the gland.
none;10 minutes;first year medical students

Hysteria

NEUROSIS AND THE TREATMENT OF NEUROSIS (nursing8;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
The goal of this lesson is to understand neurosis and the methods of treating it. The method used is the presentation of materials followed by one or more questions on the material.
none;30-45 minutes;nursing students

Ilium

HUMAN SKELETAL SYSTEM: PT.II - PELVIC GIRDLE (skelsys;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This lesson on osteology introduces the student to the bones of the pelvic girdle. Surfaces, borders and markings of the hipbone, sacrum and coccyx are illustrated and identified. The bony landmarks of the pelvic inlet and outlet are identified, as well as characteristics which aid in determining the sex of the pelvis. A post-test is included.
none;20 minutes;first year medical students

Immune complexes

CYTOTOXIC HYPERSENSITIVITY (mdimmum;1975;unpublished)
Kessel, Ross; Wagner, Kenneth; Cohen, Barry; et al.
University of Maryland and University of Illinois
This lesson deals with cytotoxic (Type II) hypersensitivity. It covers the mediators and the mechanisms of cytotoxic hypersensitivity as well as the laboratory investigation, management and pathology of some cytotoxic disease states.
none;30 minutes;first year medical students

Immunity

MOUNTING IMMUNE RESPONSES (immuresp;1978;unpublished)
Kessel, Ross; Rivera, David
University of Maryland and University of Illinois
This lesson covers the basics of the immune response, including the mediators (ab and lymphocytes), antibody synthesis, cell mediated immunity and immunotolerance.
none;none;first year medical students

Immunoglobins

MOUNTING IMMUNE RESPONSES (immuresp;1978;unpublished)
Kessel, Ross; Rivera, David
University of Maryland and University of Illinois
This lesson covers the basics of the immune response, including the mediators (ab and lymphocytes), antibody synthesis, cell mediated immunity and immunotolerance.
none;none;first year medical students

Immunology

MOUNTING IMMUNE RESPONSES (immuresp;1978;unpublished)
Kessel, Ross; Rivera, David
University of Maryland and University of Illinois
This lesson covers the basics of the immune response, including the mediators (ab and lymphocytes), antibody synthesis, cell mediated immunity and immunotolerance.
none;none;first year medical students

Inbreeding

POPULATION GENETICS: INBREEDING (angen;1974;1978)
Grossman, Michael; Walter, David
Dept. of Dairy Science, Univ. of Ill., Urbana, IL
This population genetics lesson demonstrates the significant problems of inbreeding by presenting simulations whose parameters are chosen by the students themselves. The objective of the lesson is to teach the student to deduce how the degree of inbreeding affects the loss of heterozygosity. Fairly advanced material.
none;open-ended, 10 minutes/simulation;college/university students

Income

MACROECONOMICS II: TAXES AND GOVERNMENT (macro2;1976;1979)
Paden, Donald W; Wilson, James H; Barr, Michael
Department of Economics, University of Illinois
The purpose of this lesson is to help reinforce the ideas of the first lesson on macroeconomics. Taxes and government are added to the original model to provide a more realistic view of the operation of the economy.
none;none;college/university

MACROECONOMICS:INCOME DETERMINATION - NO GOVERNMENT (macro1;1976;1979)
Paden, Donald W; Wilson, James H; Barr, Michael
Department of Economics, University of Illinois
This lesson reviews macroeconomics. It should help the user understand how the various parts of our macroeconomic system fit together and how decisions with respect to consumption and investment influence the operation of the economy and affect our economic welfare.
none;none;college/university

Income accounting

ACCRUAL CONCEPTS (accrual;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson explains the concepts of accrual basis accounting and gives the students practice in learning when to recognize revenue and expenses.
none;15-20 minutes;introductory accounting students

Indexes

BEGINNING LATIN (beglat0;1978;1976)
Scanlan, Richard T; Vollmer, Michael S
Classics Department, University of Illinois

This program is the introduction and index to a series of 40 lessons in Beginning Latin which can be used to accompany the Wheelock text, "Latin: An Introductory Course". While the lessons provide drill and practice in basic grammar and syntax following the order of Wheelock, they also make use of original materials and may be used independently of one another.

none;40 lessons, approximately 80 minutes each;college/university students

CHEMISTRY INDEX (chemistry;1975;unpublished)
Smith, Stanley
Chemistry Department. Univ. of Illinois, Urbana, Ill.

The program contains a list of the titles of available chemistry lessons on the CERL PLATO system. The lessons are mostly those developed at the University of Illinois, but includes lessons from Valparaiso University, Kennedy King College, Sangamon State University, Indiana University, Montgomery College and the UIUC School of Basic Medical Sciences.

none;open-ended;anyone interested in PLATO chemistry lessons

COMPUTER SCIENCE LESSONS (cslessons;1975;unpublished)
Friedman, H. George
Department of Computer Science, Univ. of Illinois

The Index of Computer Science Lessons consists of lessons developed by staff and students of the Department of Computer Science at the University of Illinois, Urbana, Illinois, under the ACSES project. Many of the CS lessons may be found individually through the subject and title indexes of the catalog.

none;none;none

ELEMENTARY READING ON PLATO IV (readindex;1977;1978)
Corielle, Priscilla J; Yeager, Robert F; Fillman, Lezlie A; et al.
Comp.-based Educ. Res. Lab., University of Illinois

The elementary reading curriculum addresses basic de-coding skills and presents many basic words thru a "sightword" format and several interesting games. There are also some miscellaneous story formats. Heavy use is made of the audio device, since children at this level cannot read any instructions.

touch panel, audio microfiche;2-5 min. segments,30 hours;K-1st grade

ELEMENTS FOR SELF-EXPRESSION IN FRENCH (wftable;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois

This French course has 697 language exercises contained in 257 PLATO files. From this broad index you can obtain general information about the course, a table of contents, access to individual chapters, syntax exercises and index by types of exercises, and names of PLATO files.

audio, microfiche, texts;320 hours for complete course;high school/college

ENGLISH AS A SECOND LANGUAGE ON PLATO (eslnames;1976;unpublished)
ESL Project Authors
Div. of English as a Second Language, Univ, of Ill.
This program briefly describes the lessons included in the English as a Second Language package for foreign students. It is not an index from which one jumps directly to the desired lesson although the lesson names are given. The lessons are listed individually in the subject index under "English language--Study and teaching--Foreign students."
none;open-ended;teachers studying English as a Second Language

ESPERANTO - THE INTERNATIONAL LANGUAGE (INDEX) (esperanto;1978;unpublished)
Sherwood, Judith N
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides an index to Esperanto lessons.
votrax, audio, touch panel;open-ended;general

GRAMMAR INDEX (eng92q; 1978;unpublished)
Wallace, Sally
Parkland College, Champaign, Illinois
This is an index of all grammar lessons for basic students written by Sally Wallace plus two written by Robert Bator, for research papers. All lessons may be accessed directly from index page of ths prcgram. The lessons are also individually listed in the catalog title and subject indexes.
none;open-ended;English students

INDEX OF LESSONS BY THE PLATO ELEMENTARY MATHEMATICS PROJECT (math;1976;unpublished)
Kibbey, David
University of Illinois at Urbana-Champaign
This is an index of elementary mathematics lessons prepared for teachers planning a mathematics curriculum which will include lessons on Whole Numbers, Fractions and Mixed Numbers, Decimal Fractions, Graphs, Functions, Variables and Signed Numbers.
touch panel;variable;elementary level students

INDEX TO PHYSICS LESSONS (physics;1973;unpublished)
Sherwood, Bruce Arne; Kane, Dennis
Physics Department, University of Illinois
The Index of Physics Lessons compiled at the University of Illinois contains access to lessons written by University of Illinois personnel as well as by some persons at remote sites on the U of I PLATO system. Lessons may also be found individually through the title and subject index of the catalog.
none;none;none

INDEX TO VOTRAX DEMONSTRATIONS (vdemo;1978;unpublished)
Sherwood, Bruce Arne
Computer-based Educ. Res. Lab., Univ. of Illinois

The index of demonstration lessons which use the votrax speech synthesizer contains lessons of varying types so that the application of speech synthesis in a number of areas may be observed and heard. The programs for the votrax have been written at the University of Illinois.

votrax speech synthesizer;open-ended;persons interested in speech synthesis

MATH. FOR COMMUNITY COLLEGES AND ADULT EDUCATION (mathcc;1976;unpublished)
Community College Math. Group
Computer-based Edcuation Research Lab., Univ. of Ill.

The program is the index program for a series of lessons written for Community Colleges and Adult Education under a grant from the National Science Foundation. Lessons are available in Arithmetic, Algebra and Graphing, Geometry, Measurement and Trigonometry, and Probability.

none;variable;community college and adult education students

PSYCHOLOGY STATISTICS PACKAGE (elstat0;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois, Urbana

This lesson provides an index that accesses lessons dealing with statistics useful in the study of psychology. All of the lessons have been developed at the University of Illinois.

none;open-ended;college/university students

UI-UC CLASSICS DEPARTMENT LESSON INDEX (classics;1977,78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois

This lesson provides an index to lessons available to users interested in the study of classics and related topics. Also included are vocabulary building lessons.

optional touch panel;open-ended;students of classics

WELCOME TO POPULATION DYNAMICS (INDEX) (population;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

This is an index of the lessons written by the Univ. of Ill. Population Dynamics Group for persons interested in the study of population and/or the sociological problems of population. The lessons include data for many countries to use in observing, by means of graphical displays, the effects on population of many variables conditions.

none;open-ended;general

WORD POWER (INDEX) (voc0;1978;1976)
Scanlan, Richard T
Classics Department, University of Illinois

This lesson contains the index and introduction to a series of 46 lessons on English vocabulary building. The lessons deal with prefixes, suffixes, word roots, and special topics.

optional touch panel;approximately 37 hours;college/university students

Infants (Newborn)

INTRODUCTORY PHARMACOLOGY: FETAL PHARMACOLOGY (kumc7;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson on fetal pharmacology discusses the influence of drugs on the neonate's skeletal and cardiac musculature.

none;15 minutes;first year medical students

Infants (Newborn)--Assessment

APGAR SCORING OF INFANTS (apgar;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.

This lesson teaches the use of the Apgar Scoring System which is one of the four general methods used to assist in the neonatal assessment process. The Apgar system offers a way to determine the physical status of the infant at birth. It appraises the cardiopulmonary functions.

none;15-20 minutes;nursing students

Infants (Newborn)--Diseases

ATELECTASIS AND RESPIRATORY DISTRESS SYNDROME OF THE NEWBORN (rds;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of atelectasis and respiratory distress syndrome of the newborn. An outline format is used, with review questions presented to assess the student's understanding of the material.

optional touch panel;none;first year medical students

LAB. TECH. VIEW OF HEMOLYTIC DISEASE OF THE NEWBORN (bbcarle3;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois

This lesson for medical technology students specializing in blood banking covers the causes, means of prediction, diagnosis and treatment of hemolytic disease of the newborn.

none;none;medical technology students, medical students

Infants--Care and hygiene

MULTIPLE CONGENITAL DEFORMITIES: MANAGEMENT AND PROGNOSIS (lumpy;1977;unpublished)
Trotter, David; Barmada, Riad; Nelson, Charles D
Abraham Lincoln School of Medicine, Univ. of Illinois

This lesson is a simulated case study of an infant girl with multiple congenital deformities. The student is guided through a series of tests and treatments to diagnose her problem and correct the defects. Questions are asked about procedures at various points in the lesson.

microfiche;none;medical students

Inflation (Finance)

INFLATION (inflation;1978;unpublished)
Paden, Donald W; Barr, Michael
Economics Department, University of Illinois

In this lesson several causes of inflation are examined, the reason for unemployment is reviewed and the relationship between unemployment and inflation is discussed.

none;none;college/university students of economics

Influenza--Prevention

IMMUNIZATION AGAINST INFLUENZA IN HIGH-RISK CHILDREN (flu;1976;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois

This lesson presents recommendations for vaccination of children with a high risk from contracting influenza, as specified by the American Academy of Pediatrics in the winter of 1976-77. Questions regarding the seroimmunity and antigenic characteristics of influenza are interspersed.

none;5 minutes;medical students

Information measurement

MOMENTS ABOUT THE MEAN (elstat7;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.

This lesson calculates the "moments about the mean" in order to describe the distribution of the data that the user has collected. The symbols to be used are listed and the user is furnished with definitions of the different operations.

none;open-ended;college/university students

RELIABILITY AND VALIDITY (elstat4;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.

This lesson deals with two very important properties of any instrument that is used to measure important information -- reliability and validity.

none;none;college/university students

TRANSFORMATION, Z-SCORES AND THE NORMAL CURVE (elstat9;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson presents information about transformations and furnishes the formula for finding z-scores. Then the user is introduced to the normal curve and creates examples of his own.
none;open-ended;college/university students

Infra-red spectrometry

BRIEF INTRODUCTION TO IR SPECTROSCOPY (ir2;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a brief introduction to infrared spectroscopy and several practice problems in the recognition of the infrared spectrum of some common functional groups: alcohols, amines, aldehydes, ketones, and esters.
microfiche;51 minutes;college/university students

Inscriptions, Runic

RUNES (futhark;1978;unpublished)
Hinton, Norman
Sangamon State University
The lesson describes Runes, common German writing systems used in Northern Europe between the 3rd and 13th centuries. It contains lists of characters with their meanings and passages of literature, prose and poetry, written with the runic characters.
none;10-15 minutes;high school, college, university graduate students

Insulin

DRUGS: INSULIN AND ORAL HYPOGLYCEMIC AGENTS (kumc58;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides some background material on diabetes and discusses the effects of insulin and other oral hypoglycemic agents on the condition.
none;10 minutes;first year medical students

Integrated circuits

CAMGIC: COMP. AIDED MASK GENERATION FOR INTEGRATED CIRCUITS (camgic;1977;1978)
Sinder, Dale R
Electrical Engineering Department, Univ. of Illinois
The object of this lesson is to learn how to generate computer-aided masks for integrated circuits by means of a CAMGIC circuit editor.
none;open-ended;college/university

A LOOK INTO INTEGRATED CIRCUIT TECHNOLOGY (plogichdw;1976;1978)
Lorenc, Dan; Funk, Bob
Computer Science Dept., University of Illinois
The lesson describes the advantages of integrated circuits over discrete circuitry particularly in reduced size and lower cost. The lesson discusses many aspects of such sophisticated technology.
none;none;college/university

Interaction analysis in education

FLANDER'S DATA ANALYSIS (secedi;1974;unpublished)
Gaede, Owen F
College of Education, Univ. of Ill., Urbana IL
With this lesson the user can analyse data collected in the classroom using Flander's Interaction Analysis.
none;open-ended;teachers in secondary education/student teachers

Intercontinental ballistic missiles

TRIAD AND STRATEGIC DETERRENCE (triad;1979;unpublished)
Everett, Kenneth N; Prebeck, Steven R
Air Force Reserve Officers Training Corps / U of I
This lesson provides a general overview of the concept of strategic deterrence and the role that the triad of military nuclear forces serves in that concept.
microfiche, optional touch panel;35 minutes;cadets and general public

Interest and usury

COMPOUND INTEREST (jcm;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the fundamentals of compound interest, the methods of computing present and future value, and the use of future value, present value, and present value of annuity tables.
none;open-ended;introductory and managerial accounting students

NOTES AND INTEREST (notint;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson familiarizes the student with recording notes and calculating and recording interest and discounts.
none;45-60 minutes;introductory accounting students

Internal medicine

AUTOMATED CHEM II: INTRODUCTION TO THE SMA 12/60 (sma12;1978;unpublished)
Przepiorka, Donna; Ressler, Newton; Law, Ricky M
Abraham Lincoln Medical School, Univ. of Illinois
The purpose of this lesson is to acquaint the student with the SMA 12/60 laboratory test. It is similar in design and format to PLATO lesson "Automated Chem I: Introduction to the SMA 6/60."
microfiche;30 minutes;medical students and students of medical technology

AUTOMATED CHEM I: INTRODUCTION TO THE SMA 6/60 (sma660;1978;unpublished)
Przepiorka, Donna; Ressler, Newton; Law, Ricky M
Abraham Lincoln Medical School, Univ. of Illinois

The purpose of this lesson is to acquaint the student with the usefulness and limitations of the SMA 6/60. A modicum of knowledge of basic pathophysiology is necessary to analyze the data presented. The program emphasizes the sources of technical error as well as special methods of analysis. Clinical case studies are included.

microfiche;30 minutes;medical students and students of medical technology

THE CASE OF THE AILING ALIEN (montezuma;1978;unpublished)
Blecka, Lawrence J; Nelson, Charles D
Abraham Lincoln Medical School, Univ. of Illinois

In this simulation, Jose Amateo comes into the office with his cousin Pedro as translator. Jose has just arrived from rural Mexico within the past few days and has stomach pains, diarrhea and other discomfort. The student must gather history, lab and physical data, make a diagnosis, and treat the patient.

microfiche;none;medical students

DIABETES INSIPIDUS (insipid;1978;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the Univ. of Illinois

Upon completion of this lesson the student should understand the causes, clinical presentation, etiology, diagnosis and treatment of diabetes insipidus. A clinical quiz of 8 cases of hypotonic polyuria gives the student a chance to apply this knowledge.

none;none;medical students

MALABSORPTION SYNDROME: SHIRLEY WISP PASSED OUT THIS MORNING (diarrhea;1976;unpublished)
DuPuis, William; Pratt, Raymond; Wong, Ruth; et al.
Abraham Lincoln Medical School, Univ. of Illinois

This lesson is a simulated patient interview, physical and treatment session. Through asking questions and ordering lab tests, etc., the patient's illness is to be diagnosed and treated. Each decision made by the student is scored, whether it be a question asked or a treatment decision. Finally, diagnosis is made and the scores are given.

none;30 minutes;medical students

YELLOW DIRT DOWN IN MY SOUL (yellowdirt;1977;unpublished)
Alora, Angeles; Kemp, Larry; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development

In this simulation, Peter Seaman is a merchant sailor just back from Southeast Asia. He has headache, nausea, and fever, and has noticed that his skin is attaining a pronounced yellow palor. The student is required to gather history, lab and physical data, make a diagnosis and treat the patient.

none;none;medical students

Intestines--Bacteriology

THE CASE OF THE SEAWATER SALAD (cruise2;1978;unpublished)

Levy, Allan H

School of Basic Medical Sciences, Univ. of Illinois

This lesson stresses the epidemiological aspects of a case of enteric infection aboard a cruise ship caused by a relatively uncommon pathogen, vibio parahemolyticus. The material is from the "Morbidity and Mortality Weekly Reports," published by the Center for Disease Control, Atlanta, Georgia. The student is presented with questions throughout the lesson.

none;5-10 minutes;medical students

GASTROINTESTINAL ILLNESS ABOARD A CRUISE SHIP (cruise;1976;unpublished)

Levy, Allan H

School of Basic Medical Sciences, Univ. of Illinois

This lesson relates an outbreak of bacterial enteritis on a cruise ship in the Carribean. Emphasis is on epidemiological aspects of transmission and prevention. The material is taken from a case report in "Morbidity and Mortality Weekly Reports" published by the Center for Disease Control, Atlanta, Georgia. Questions are interspersed throughout the lesson.

none;5 minutes;medical students

Intravenous catheterization

DIRECT HYDRAULICALLY COUPLED BLOOD PR. MEAS. (bioinst3;1978;1980)

Olson, Walter H; Clapman, Ronald M; Nelson, Mark W; et al.

Dept. of Electrical Engineering, U of I, Urbana

The purpose of this lesson is to provide an introduction to the principles and practices of the direct method of measuring blood pressure. The user will be designing an hydraulically coupled catheter-transducer which will meet the specifications of measuring blood in a physiological system.

none;none;college/university students

Investments--Accounting

TEMPORARY INVESTMENTS (tempinv;1978;unpublished)

McKeown, James C

Department of Accountancy, U of I, Urbana, Ill.

This lesson teaches initial recording of temporary investments, recording revenue from temporary investments, valuation of temporary investments, disposition of temporary investments.

none;45-60 minutes;introductory accounting students

Iodine in the body

MICROMINERALS (minmin;1977;unpublished)

LaFont, Frances M

School of Human Resources and Family Studies, U of I

This lesson discusses microminerals, or those elements that are required in the human diet in amounts less than 100 mg. per day. Iron, iodine and fluorine are three of the most important.

none;25-30 minutes;nutrition students

Ions

CHEMICAL NOMENCLATURE - NAMING IONS AND SALTS (chemnom2;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
This is the first in the series of separate lessons on Chemical Nomenclature. This lesson involves the naming of cations, anions, polyatomic ions and salts.
none;none;college/university students

HOW TO WRITE EQUATIONS FOR NET IONIC REACTIONS (ions;1977;unpublished)
Moore, Carolynn
Chemistry Dept., Univ. of Illinois, Urbana, IL
The lesson introduces some of the properties of Ionic Compounds, chemical compounds made up of ions.
none;none;college and university students of general chemistry.

INORGANIC NOMENCLATURE (chemnom;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
The lesson gives instruction in how to name some chemical compounds (ions, salts, acids, and multivalent cations). Practice drills are included. All the material is in one lesson. Similar material by the same author is divided into three lessons which are described separately.
none;39 minutes;college/university students of beginning chemistry

INORGANIC NOMENCLATURE DRILLS (compound;1973;1977)
Grandey, Robert C; Adams, Edward
Computer-based Educ. Res. Lab., University of Illinois
The lesson allows the student to do drills on names and formulas of salts, acids and bases (binary non-metallic compounds). The drills may be designed by instructors, may be standard drills, or may be made up by the student.
none;none;college/university chemistry students

Iron deficiency anemia

DRUGS: HEMATINIC AGENTS (kumc47;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson discusses the different anemias. Therapy precribed is based on the etiology of the type of anemia.
none;10 minutes;first year medical students

Iron in the body

MICROMINERALS (minmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson discusses microminerals, or those elements that are required in the human diet in amounts less than 100 mg. per day. Iron, iodine and fluorine are three of the most important.
none;25-30 minutes;nutrition students

Ischemia

CELL INJURY: INTRO. TO CELL INJURY & CELL DEATH (cellinjury;1976;unpublished)
Mergner, Wolfgang; Bennett, Charles
School of Medicine, Univ. of Maryland, Baltimore

This lesson defines cell injury, distinguishes acute chronic cell injury, defines reversible and irreversible cell injury, and differentiates between the two by defining the "point of no return." The lesson also describes the three factors of ischemic cell injury: anoxia, lack of perfusion, and lack of substrate.

none;15 minutes;first year medical students

Journalism

Newspapers

NEWSPAPER (newspapers;1977;1978)
Sinder, Dale R
Electrical Engineering Department, Univ. of Illinois

This is a program allowing an author to generate a newspaper containing up to 62 articles, 40 active at one time. The articles may be indexed and cross referenced for search and retrieval. Any number of people may contribute articles to the newspaper. Limited authoring rights may be given to all PLATO users without revealing the common code.

none;open-ended;any PLATO author

Karyotypes

CHROMOSOMES AND KARYOTYPING, PART I (chrom;1975;unpublished)
Chirolas, Darlene
School of Basic Medical Sciences, Univ. of Illinois

This lesson describes the characteristics and classification of chromosomes and presents the standard human karyotype symbols and notation. Eight syndromes are explained along with the karyotype notation and clinical signs for each. Barr bodies and the Lyon hypothesis are also discussed.

microfiche;30 minutes;first year medical students

CHROMOSOMES AND KARYOTYPING, PART II (karyo;1975;unpublished)
Chirolas, Darlene; Tenczar, Paul J
School of Basic Medical Sciences, Univ. of Illinois

This two part lesson deals with identification of karyotypes and actual karyotyping.

touch panel and microfiche;15 minutes;first year medical students

Ketones

REACTIONS OF ALDEHYDES AND KETONES (PART 2) (ketone2;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson continues the discussions of reactions of aldehydes and ketones.The subjects include enolization, H-D exchange, halogenation of ketones, and aldol condensation reactions with appropriate problems.

none;55 mminutes;college/university students

REACTIONS OF ALDEHYDES AND KETONES: PRAC. PROBLEMS (ketprob;1975,1978;1977)
Smith, Stanley
Chemistry Department, University of Illinois
Practice problems are presented for some reactions associated with the preparation and reactions of aldehydes and ketones.
touch panel;23 minutes;college/university students

SOME ADDITION REACTIONS OF ALDEHYDES AND KETONES (ketone;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is in two parts. The first part contains a simulated experiment to determine the mechanism of cyanohydrin formation. It deals with hemiacetals, acetals, etc. The experimental determination of the pH rate profile for oxime formation is illustrated and the formation of phenylhydrazone and DNP formation is included.
none;42 minutes;college/university students

Key signatures

KEY SIGNATURES (mustheory2;1976;1977)
Murray, David J
School of Music, University of Illinois
This lesson will teach the naming of key signatures. A prerequisite is the understanding of the purpose of key signatures, their effect on sound and the entire concept of "key".
none;none;college/university

Kidneys

FLUIDS AND ELECTROLYTE BALANCE IN THE NEONATE (fluids;1978;unpublished)
Buchholz, Linda M
University of Wisconsin, Madison, Wisconsin
This lesson is designed to acquaint neonatal intensive care personnel with the basic principles involved in fluid and major electrolyte balance of the neonate.
touch panel;none;nursing students

FUNDAMENTALS OF URINE FORMATION (uformr;1974;1978)
Dorner, J L; Dulisch, M L
College of Veterinary Medicine, University of Illinois
The lesson explains how urine is formed and excreted from the body. Renal anatomy diagrams and terminology are described and the physiology of urine formation is presented with illustrations.
none;1-2 hours;professional students in veterinary medicine

INTRODUCTION TO RENAL FUNCTION (kidney;1976;unpublished)
Rikel, James E; Cohen, Paul
University of Southern California
This lesson provides introductory information and diagrams about the kidney and renal function.
none;15 minutes;first year medical students

RENAL PHYSIOLOGY - BODY FLUIDS IV: FLUID COMPARTMENT MECH.
(bfcom3;1978;unpublished)
McCraw, Gordon W; Lawrance, David P; Sommers, Jack M; et al.
Oklahoma University Health Sciences Center

This lesson presents a description of the fluid inputs and outputs of the body, including a description of the body's fluid compartments, with an associated fluid input/output chart for student practice and a post test for adequate feedback.

none;15 minutes;first year medical school

RENAL PHYSIOLOGY - BODY FLUIDS PART II: FLUID COMPARTMENTS
(bfcom1;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center

In this lesson the student will become familiar with total body water, extracellular, interstitial and intracellular fluids, and lean body mass.

none;15 minutes;first year medical students

RENAL PHYSIOLOGY - BODY FLUIDS PART I: OSMOTIC FORCES (bfcom4;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center

In this lesson the student is presented with the material that must be mastered prior to studying renal physiology. Under the heading of osmotic forces, solute concentration, osmolality, the components of plasma and the significance of the anion gap are the subjects discussed.

none;20 minutes;first year medical students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART I
(bbcarle4a;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois

This is the first of a lesson series on renal function and laboratory evaluation and provides students with a basic understanding of renal physiology and function.

none;none;1st year med. and med. tech. students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART II
(bbcarle4;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois

This is second in a series of three lessons, and familiarizes the student with the laboratory tests used in urinalysis, the evaluation of renal function and the principles behind these tests.

none;none;1st year med. and med. tech. students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART III
(bbcarle4c;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson provides the quiz over the first two parts of this series and offers the student a chance for self-assessment over renal function and laboratory evaluation.
none;none;1st year med. and med. tech. students

Kinematics

GRAPHICAL KINEMATICS (grafdif;1973,77;1978)
McNeil, E B
Physics Dept., Univ. of Ill. at Chicago Circle
The lesson teaches the connection between the slope of a curve and its derivative, in other words: graphical differentiation. The student makes input by means of a graphics cursor. The immediate feedback provides an advantage over the usual homework problem pencil and paper method of practice and understanding of the subject.
none;2 hours;college and university students

KINEMATICS I (kineml;1970,1972;1977)
Sherwood, Bruce Arne; Peterson, S Bradley; Beece, Daniel
Physics Department, University of Illinois
The lesson presents the basic concepts of position, velocity, acceleration, and time based on the familiar aspects of automobile travel. The lesson includes training in the reading of graphs, and in applying the principles illustrated in the lesson. A mastery quiz is included.
none;40 minutes;college/university students in introductory physics

KINEMATICS II (kinem2;1973,1977;1977)
Sherwood, Bruce Arne; Beece, Daniel
Physics Department, University of Illinois
The lesson presents a simple numerical integration with graphs which leads up to the derivation by the student of the equation $x_f = x_i + v_i t + at^2/2$, the determination of the position of an object given its acceleration. Applications of the concepts and a mastery quiz are included.
none;90 minutes;college/university students in introductory physics

ORBITS (orbits2;1974;unpublished)
Bennett, Carol D; Kane, Dennis
Physics Department, University of Illinois, Urbana
The lesson presents two-dimensional orbit equations and numerical two-dimensional kinematics. Vectors are defined and their proper notation discussed, as well as gravitational acceleration. The procedures are explained and the equations can be plotted.
none;none;physics students

TWO-DIMENSIONAL KINEMATICS (kinem3;1975;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson introduces and tests the basic concepts of vector displacement, velocity, average velocity, and acceleration. Various applications deal with kicking a football. Circular motion is also treated, including a derivation of the radial acceleration v^2/r. Applications include satellite motion. A mastery quiz ends the lesson.
none;170 minutes;college/university students in introductory physics

Knee--Wounds and injuries

PAINFUL KNEE IN A CHILD: MANAGEMENT AND PROGNOSIS (knee;1977;unpublished)
Trotter, David; Ray, Robert D; Nelson, Charles D
Abraham Lincoln School of Medicine, Univ. of Illinois
In this simulated case study, an eight-year-old male is presented with a painful knee resulting from a street fight. The student must diagnose and treat the problem from historical and physical information gathered, and from the interpretation of x-rays.
microfiche;none;medical students

Krebs cycle

INTERMEDIARY METABOLISM: TCA CYCLE (mtca2;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois
This lesson describes and summarizes many important characteristics of the Tricarboxylic Acid (Krebs) Cycle. The cycle is divided into three sections, each of which consists of a textual explanation, a quiz over the material and a drill covering the names of metabolites and enzymes.
none;40 minutes;first year medical students

RESPIRATION AND ENZYMES (respir;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the general scheme of glycolysis, Krebs cycle and electron transport. It also helps the student to understand the relationship of glycolysis to aerobic respiration.
none;45 minutes;college/university students

Labor supply--Mathematical models

ECONOMIC DEVELOPMENT TWO SEX VERSION (riley;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using variables of two sex (male and female) economic development can be graphed. A list of available regions is provided and the variables can be changed for each projection.
none;open-ended;persons studying populations

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LABOR FORCE ANALYSIS (labor1;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using labor force analysis variables can be graphed. A list of available regions is provided and variables can be changed in each projection.
none;open-ended;for persons studying populations

Labor (Obstetrics)

COMPLICATED LABOR STUDY 1 (conceal;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This lesson is concerned with the hemorrhagic condition of the antepartum period. This case study contains a brief prenatal history, a description of the mother's progress during labor, and a nurse's assessment of the mother's condition.
microfiche;30-45 minutes;nursing students

LABOR CASE STUDY -- MULTIGRAVIDA (mcase;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Sciences Div., Parkland College, Champaign, Ill.
This case study of a multigravida labor patient treats both the physical and emotional aspects of labor and delivery.
microfiche;30-45 minutes;nursing students

LABOR CASE STUDY -- PRIMAGRAVIDA (pcase;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This case study of a primigravida labor patient treats both the physical and emotional aspects of labor and delivery.
microfiche;50-60 minutes;nursing students

LAMAZE CHILDBIRTH PREPARATION (lamaze;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This lesson on the Lamaze method contains a description of the phases of labor, description and explanation of the Lamaze technique for phases of labor, description and explanation of the Lamaze techinique for delivery and a simulated case history.
none;20 minutes;nursing students

MECHANISM OF LABOR (mnurse5;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson is concerned with a normal delivery and emphasizes the mechanism of labor - the progressive movements of the fetus through the pelvic passage.
none;none;nursing students

OBSTETRICAL ANATOMY PART I (mnurse3;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.

This lesson is concerned with the culmination of pregnancy: labor, the series of processes by which the infant and accessory parts are expelled from the mother's body, and delivery, the actual expulsion of the infant.

none;none;nursing students

OBSTETRICAL ANATOMY PART II (mnurse4;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.

This lesson continues the discussion begun in "Obstetrical Anatomy Part I" with information about the presentation, position and degree of descent, which is necessary to evaluate the progress of labor.

none;none;nursing students

PHENOMENA OF LABOR PROCESS (labpro;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.

The general objective of this lesson is to investigate the various methods of assessing progress in labor and delivery and to define the terms used in describing the status of labor of a patient.

microfiche;60-90 minutes;nursing students

Languages
see Chinese

Languages
see English

Languages
see Esperanto

Languages
see French

Languages
see Latin

Languages
see Russian

Languages
see Spanish

Languages, Modern--Spoken language

ELEMENTS FOR SELF-EXPRESSION IN FRENCH (wftable;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois

This French course has 697 language exercises contained in 257 PLATO files. From this broad index you can obtain general information about the course, a table of contents, access to individual chapters, syntax exercises and index by types of exercises, and names of PLATO files.

audio, microfiche, texts;320 hours for complete course;high school/college

ELEMENTS FOR SELF-EXPRESSION IN FRENCH: DIALOGUES (wfd;1976;unpublished)
Marty, Fernand; Hart, Robert; Campanini, Sue; et al.
French Department, University of Illinois

These French dialogue lessons, which can be done in the French to English mode or English to French mode, are designed to give the student practice in conversation. They can be used for dictation also.

audio, microfiche, texts;none;high school/college students

Latin

Composition

BEGINNING LATIN (beglat0;1978;1976)
Scanlan, Richard T; Vollmer, Michael S
Classics Department, University of Illinois

This program is the introduction and index to a series of 40 lessons in Beginning Latin which can be used to accompany the Wheelock text, "Latin: An Introductory Course". While the lessons provide drill and practice in basic grammar and syntax following the order of Wheelock, they also make use of original materials and may be used independently of one another.

none;40 lessons, approximately 80 minutes each;college/university students

DE LATINA SCRIBENDA (rome0;1973;1976)
Scanlan, Richard T
Classics Department, University of Illinois

A series of 31 lessons is presented which provide a complete review of Latin grammar and syntax through the medium of prose composition. Most lessons have four parts: form drills; composition exercises, vocabulary review and diagnostic self-tests. Error diagnostic messages are available for the student's translations from English to Latin.

none;31 lessons - 60 minutes each;college/university students

UI-UC CLASSICS DEPARTMENT LESSON INDEX (classics;1977,78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois

This lesson provides an index to lessons available to users interested in the study of classics and related topics. Also included are vocabulary building lessons.

optional touch panel;open-ended;students of classics

Latin

Grammar

BEGINNING LATIN (beglat0;1978;1976)
Scanlan, Richard T; Vollmer, Michael S
Classics Department, University of Illinois

This program is the introduction and index to a series of 40 lessons in Beginning Latin which can be used to accompany the Wheelock text, "Latin: An Introductory Course". While the lessons provide drill and practice in basic grammar and syntax following the order of Wheelock, they also make use of original materials and may be used independently of one another.

none;40 lessons, approximately 80 minutes each;college/university students

UI-UC CLASSICS DEPARTMENT LESSON INDEX (classics;1977,78;unpublished)
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Classics Department, University of Illinois

This lesson provides an index to lessons available to users interested in the study of classics and related topics. Also included are vocabulary building lessons.

optional touch panel;open-ended;students of classics

Latin America

Civilization

INTRODUCTION TO SPANISH CULTURE (spancult;1976;1976)
Armengol, Armando; Dutton, Brian
Spanish Department, University of Illinois

Part I traces the history of Spain. Part II deals with Spanish America, its colonization and development.

Lesson continued in -spancult2-.

none;2-2 1/2 hours;high school/college students

History

INTRODUCTION TO SPANISH CULTURE (spancult;1976;1976)
Armengol, Armando; Dutton, Brian
Spanish Department, University of Illinois

Part I traces the history of Spain. Part II deals with Spanish America, its colonization and development.

Lesson continued in -spancult2-.

none;2-2 1/2 hours;high school/college students

Lattice theory

THE RECIPROCAL LATTICE (rcplt;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL

The lesson, the second in the series of lessons on Elementary Crystallography, introduces the concept of the reciprocal lattice in order to permit its application to the calculations in the lesson on the Metric Tensor and the representation of the geometry of planes in the lessons on the Use of the Optical Goniometer and Gnomonic Projections.

none;none;college and university undergraduate and graduate students

Law, Business

see Business law

Law examinations

MULTISTATE BAR EXAMINATION (barl;1972, 1978;unpublished)
Maggs, Peter B
College of Law, University of Illinois, Urbana, Ill.

The purpose of this lesson is to allow law students to practice taking the bar examination using questions from previous tests. It is constructed so that the students may compare their performance with others who have used the lesson. While the sample questions illustrate some types of questions that will be used, not all material is represented.

none;90 minutes/50 question section;law students

Law--Contracts

see Contracts

Law--Interpretation and construction

THE STATUTE OF FRAUDS (pfrauds;1978;unpublished)
Maggs, Peter B; Platt, Robert C
College of Law, University of Illinois, Urbana, Ill.

The lesson is a review of the Statute of Frauds designed for students who have already some familiarity with the statute. The student is asked questions based on various situations which might arise in contracts to which the Statute of Frauds applies.

none;open-ended;first year students of law

Leadership

DISCUSSION LEADING TECHNIQUES (discuss;1978;unpublished)
Browdy, Marshall; Coleman, Ronald
U of I Medical School, Cntr. for Ed. Development

This lesson presents various techniques a discussion leader might use, regardless of subject matter, to guide and facilitate a small group discussion. It is stressed that the methods used by a group leader to encourage spontaneous interactions are important.

microfiche;20-25 minutes;medical students, general audience

Learning

Animals, Habits and behavior of

THE PHYSIOLOGICAL BASIS OF LEARNING (plearn;1976;1977)
Boggs, Stephen H
CERL, University of Illinois

The lesson explains the physiological basis of learning. It assumes the student is familiar with neuron structure and function.

none;30 minutes;college/university students

Leaves--Morphology

PHOTOSYNTHESIS (photosyn1;1973;1980)
Haney, Alan W; Noell, John
Botany Dept., U of I, Urbana, Ill.

This lesson describes the relationship of leaf structure and function, explains the principles of chromatography, identifies the fate of raw materials in photosynthesis and illustrates the varying photosynthetic efficiencies of plants.

none;40 minutes;college/university students

PLANT TAXONOMY (taxon1;1975;unpublished)
Haney, Alan W
Botany Dept., U of I, Urbana, Ill.

This lesson teaches the student to use a taxonomic key and to recognize plant characteristics commonly used in vegetative keys.

microfiche;45 minutes;college/university students

Leg

HUMAN SKELETAL SYSTEM: PART III - THIGH AND LEG (skelsys3;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thigh and leg. Surfaces, borders and markings of the femur, patella, tibia and fibula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

Legislation--United States--Illinois

ILLINOIS LEGISLATIVE PROCESS: INTRODUCTION (houseintro;1978;unpublished)
Hinton, Chris P
Sangamon State University, Springfield, Illinois

This lesson provides a brief introduction to the legislative process in the Illinois House of Representatives. It includes discussion of the legislative organization, calendar of the session, organization of the General Assembly, lawmaking in Illinois, and bargaining, compromise and coalition building.

none;open-ended;law, political science students, legislative interns

ILL. LEGISLATIVE PROCESS: CONCURRENCE AND VETOES (endhouse;1979;unpublished)
Schutt, Stephen L
Center for Advanced Study, University of Illinois
This lesson explains the consequences of concurrence and vetoes when a bill is submitted to the Illinois House of Representatives.
none;30 minutes;law, political science students, legislative interns

ILL. LEGISLATIVE PROCESS: HOUSE OF REPS. (statehouse;1979;unpublished)
Schutt, Stephen L
Center for Advanced Study, University of Illinois
This lessons allows the user to play the role of a repesentative in the House who is trying to pass a bill. Various conditions about relations with others in the House and about the bill itself can be manipulated. A flow chart of the process shows the user the status of the bill as it moves through the legislative process.
none;open-ended;law, political science students, legislative interns

Leishmaniasis

MEDICAL PARASITOLOGY X: LEISHMANIASIS (leish; 1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents the hemoflagellate characteristics, and compares the life cycles, laboratory diagnoses, pathogenicity, symptomatology and treatments of cutaneous, mucocutaneous, and visceral leishmaniases. A linear format with inserted questions may be accessed for the diseases or only text may be accessed for category comparison.
none;15 minutes;first year medical students

Lenses

GEOMETRIC OPTICS - THIN LENS EXERCISES (lenses;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois
Graphical exercises are presented in drawing the principal rays for a concave and a convex thin lens. Calculation of the image positions is also part of the exercises.
none;none;students in elementary physics

INTRODUCTION TO OPTICAL MICROSCOPY (mscope;1977;unpublished)
Snellen, James E
School of Basic Medical Sciences, Univ. of Illinois
This lesson acquaints the student with some of the fundamental principles of optical microscopy. It includes the nature of vision, different types of lenses, and the optical microscope.
none;15 minutes;first year medical students

Lesson planning

CORRECTIVE FEEDBACK PARADIGM (cfp;1975;unpublished)
Siegel, Martin A; Misselt, A Lynn; Tatsuoka, Kay
PLATO Education Group, CERL, Univ. of Illinois
This is a program giving a corrective feedback and criterion teaching model for PLATO drills. It is a model which is very different from standard drill routines. It features: 1) review positions for items "missed", 2) specification of criterion for number of times correct answers must be given, 3) discrimination training and feedback on items confusing user.
none;open-ended;teachers interested in designing drill routines using PLATO

CORRECTIVE FEEDBACK PARADIGM: AN EXAMPLE (feedback;1975;unpublished)
Siegel, Martin A; Misselt, A Lynn; Tatsuoka, Kay
PLATO Education Group, CERL, Univ. of Illinois
The lesson is an example of the Corrective Feedback Paradigm, a corrective feedback and criterion teaching model for PLATO drills. There is no inspect code on the lesson so it may be examined for information on how the defines, -use-s and other options are set up. The complete description of the drill paradigm may be found in lesson "cfp".
none;none;teachers interested in designing drill routines using PLATO

MULTIPLE CHOICE QUIZ CONSTRUCTION (muchoq;1976;1978)
Kraatz, James M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson allows an instructor to make up a multiple choice quiz without the need to know TUTOR authoring.
none;open-ended;instructors

PLATO AND INSTRUCTIONAL DESIGN (esl;1975;unpublished)
Steinberg, Esther R
Comp.-based Educ. Res. Lab., Univ. of Illinois
This lesson focuses on instructional design problems that are unique to PLATO or that require special attention or consideration on PLATO.
none;none;PLATO lesson authors

SOME THOUGHTS ON STYLE AND TECHNIQUES OF LESSON WRITING (style;1973;1977)
Nievergelt, Jurg
Department of Computer Science, University of Illinois
This lesson offers suggestions to authors writing PLATO lessons. The sections of the lesson include introductory comments, DO's of lesson writing, DON'Ts of lesson writing and some further ideas about successful lessons.
none;15 minutes;PLATO authors

WRITING PLATO LESSONS: DO'S AND DON'TS (es;1975;unpublished)
Steinberg, Esther R
Comp.-based Educ. Res. Lab., Univ. of Illinois
This lesson demonstrates some do's and don'ts that authors may find useful when writing and/or improving PLATO lessons.
none;none;PLATO lesson authors

Leukemia

CASE STUDIES IN COAGULATION II: THE GIRL IN THE DORM (coag2;1976;unpublished)
Rodriguez-Erdmann, Franz; Bonetti, William
Abraham Lincoln Medical School, Univ. of Illinois

This lesson simulates a doctor being called to a college dormitory to see an 18-year-old female because she has been feeling ill for a few days. Her complaints are a cold, blurred vision and a rash. The student must diagnose and recommend treatment for the patient.

none;none;medical students

Liabilities (Accounting)

LONG-TERM LIABILITIES (ltliaba;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.

This lesson reviews the accounting for long-term liabilities from the debtor's point of view. A knowledge of the reasons for and the process of amortization of discount or premium is presumed. The straight line method of calculating amortization is used.

none;20-30 minutes;introductory accounting students

Library catalogs

HOW CAN I USE THE CARD CATALOG? (library1;1977;unpublished)
Park, Chung I
Library, Malcolm X College, Chicago, Illinois

This lesson provides information on how to use the card catalog in a library, emphasizing the fact that it is more than just a location finder for books. Each line of information on the catalog card is illustrated and explained. Additionally, the arrangement of cards within the catalog drawers is discussed.

none;60 minutes;community college/undergraduate students

Library orientation

HOW CAN I USE THE CARD CATALOG? (library1;1977;unpublished)
Park, Chung I
Library, Malcolm X College, Chicago, Illinois

This lesson provides information on how to use the card catalog in a library, emphasizing the fact that it is more than just a location finder for books. Each line of information on the catalog card is illustrated and explained. Additionally, the arrangement of cards within the catalog drawers is discussed.

none;60 minutes;community college/undergraduate students

WHAT CAN I FIND IN GENERAL REFERENCE BOOKS? (clibrary1;1978;unpublished)
Park, Chung I
Library, Malcolm X College, Chicago, Illinois

This lesson provides an overview of the different types and characteristics of general reference books found in libraries, enabling the student to develop ways of more efficiently searching for information.

none;60 minutes;community college/undergraduate students

Linear system theory

GENERAL LINEAR SYSTEMS SIMULATOR (linsys;1976;1979)
Beck, Howard W; Kuo, Benjamin C
Dept. Elec. Engineering, U of I, Urbana, Ill.
This lesson will compute the time solution of a set of linear differential equations. The user must specify the matrices, appropriate dimensions, initial condition and initial and final times over which the simulation is to be run.
none;open-ended;college/university students

Linguistics, French

SÉRIE LINGUISTIQUE APPLIQUÉE(tfl;1976;1977)
Marty, Fernand; Ariew, Robert
French Department, University of Illinois
This lesson and the following one, "tf2", comprise a series of French linguistic exercises which are presented in ten parts.
audio disc;12 hours;none

Linkage (Genetics)

GENE MAPPING IN DIPLOID ORGANISMS (cover;1973;unpublished)
Scotese, Karen Frank
University of Illinois Circle Campus, Chicago, Ill.
This lesson discusses crossover and gene mapping and follows with practice problems.
none;60-90 minutes;biology students and persons interested in genetics

Lipid metabolism

HORMONAL CONTROL: CARBOHYDRATE AND LIPID METABOLISM (endo;1978;unpublished)
Jackson, Gary L; Johnson, E. Wayne; Trynda, Richard S
College of Veterinary Medicine, University of Illinois
In this program the user will study the effects of five hormones on the levels of blood glucose and the stimuli for their release, as well as the mechanism of muscle, liver and adipose cell response to the same five hormones. A short quiz is given after each section and a comprehensive quiz may be taken at the end of the lesson.
none;none;students of veterinary medicine

Lipids

IDENTIFICATION OF LIPID AND LIPID-LIKE COMPOUNDS (mlipqz;1976;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson is a multiple choice proficiency drill covering the structures and nomenclature of selected lipids and lipid-like compounds.
none;10 minutes;first year medical students

Lipids in nutrition

LIPIDS (nutr4;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson, the fourth in the Nutrition Series, discusses the fats, oil and fatlike substances called lipids.
none;25-30 minutes;nutrition students

List processing (Electronic computers)

MINI-PROGRAMMING SYSTEM FOR TREE & LIST MANIPULATION (cstrees;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Ill., Urbana, IL
This lesson allows the student to define binary trees and linked lists in recursive terms and to write and simulate the execution of a program. The execution of the program is shown graphically. Six programs are provided as examples or the student may experiment with his own, altho' he cannot save his program when he exits from the lesson.
none;open-ended;college and university students studying computer science

Literature

see English literature

Liver function tests

CLINICAL CHEMISTRY COMPREHENSIVE EXAM. PART II (bbcarle2;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson provides a self-assessment exam for laboratory technology students in clinical chemistry covering liver function, endocrinology, protein and non-protein nitrogen, enzymes, electrolytes and acid/base.
optional touch panel;open-ended;students of laboratory technology

Liver--Cancer

ORAL CONTRACEPTIVES AND NEOPLASIA (ocneo;1979;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the types of epidemiological studies used to investigate the possible relationships between oral contraceptive use and neoplasia. The risk factors for contracting breast, cervical, endometrial, and liver cancer are reviewed, and the results of studies relating oral contraceptive use to the aforementioned cancers are presented.
none;30 minutes;first year medical students/health science students

Liver--Diseases

PROBLEM SOLVING IN CLINICAL MEDICINE: RETURN VISIT (feinz9;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois

In this simulation the 43-year-old male patient has been asked to return to the clinic following a routine physical and laboratory tests that yielded a problem list. The user is a student physician working in an ambulatory care facility who has handled this case. Choices are made from options provided and each selection is discussed.

none;none;medical students

Local finance

FUNDING FORMULA HANDBOOK (formula;1979;unpublished)
Berger, Michael
Center for Advanced Study, University of Illinois

In this introduction to the use of funding formulas, the user, through the use of a prototype "calculator" facility, examines a sample CETA funding formula to see how funding for a given Illinois county can be affected by changing the formula.

touch panel;40-60 minutes;students of law, economics, political science

Logarithms

LOG SCALES, METRIC SYSTEM, CHI-SQUARE ANALYSIS (met;1978;unpublished)
Hyatt, Gary; Baillie, Robert
Dept. of Biological Sciences, U of I, Chicago Circle

This lesson uses question-answer and drill and practice techniques to demonstrate use of the metric system, logarithmic scales and chi-square analysis.

none;variable, depending on parts used;university/college students

LOGARITHMS: LESSON 1 - BASE TEN LOGS (logs1;1974;unpublished)
Shirer, Donald L
University of Arizona, Tuscon

This lesson presents material about the relationship between powers of ten, a shorthand notation for repeated multiplication of tens, and logarithms, a convenient way to work with products or ratios.

none;none;high school and junior college

LOGARITHMS: LESSON 2 - FINDING LOGS (logs2;1974;unpublished)
Shirer, Donald L
University of Arizona, Tuscon

This lesson provides information for finding logarithms which are not exact powers of ten.

none;none;high school and junior college

Logic, Symbolic and mathematical

COMPUTER LOGIC AND DIGITAL CIRCUITRY (logic;1976;unpublished)
Whisenhunt, Gary; Wood, Ray
Southern Illinois University, Carbondale, IL
The lesson is an elementary digital logic lesson covering number systems, binary numbers, flip flops, logical operators, and boolean algebra.
none;variable;college/university students

MANIPULATING LOGICAL EXPRESSIONS (minbool;1975;1977)
Meller, David V
Comp.-based Educ. Res. Lab., University of Illinois
This is a utility program. It introduces the concepts of simplification and minimization and allows simplification or minimization of logical expressions. It does not provide an introduction to Boolean Algebra. It assumes that the student can write Boolean expressions.
none;open-ended;college/university

Lungs

GROSS ANATOMY OF THE THORACIC CAGE (shp90;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson presents the anatomy of the thoracic cage.
none;90 minutes;physicians' assistants

Lungs--Collapse

ATELECTASIS AND RESPIRATORY DISTRESS SYNDROME OF THE NEWBORN (rds;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of atelectasis and respiratory distress syndrome of the newborn. An outline format is used, with review questions presented to assess the student's understanding of the material.
optional touch panel;none;first year medical students

Lungs--Congestion

CIRCULATORY DISORDERS OF THE RESPIRATORY SYSTEM (congest;1976;unpublished)
Perrymore, W. Dale; McCraw, Gordon W; Leveridge, C. Tony
Oklahoma University Health Sciences Center
This lesson covers pathological and clinical aspects of various circulatory diseases of the respiratory system. Included are CPC, cor pulmonale, pulmonary embolism, edema infarcation and hypertension. The material is presented in a highly indexed outline format, facilitating access to each specific area.
optional touch panel;30 minutes;first year medical students

Lungs--Diseases

CIRCULATORY DISORDERS OF THE RESPIRATORY SYSTEM (congest;1976;unpublished)
Perrymore, W. Dale; McCraw, Gordon W; Leveridge, C. Tony
Oklahoma University Health Sciences Center

This lesson covers pathological and clinical aspects of various circulatory diseases of the respiratory system. Included are CPC, cor pulmonale, pulmonary embolism, edema infarcation and hypertension. The material is presented in a highly indexed outline format, facilitating access to each specific area.

optional touch panel;30 minutes;first year medical students

GRANULOMATOUS INFECTIONS OF THE RESPIRATORY SYST. (granuloma;1977;unpublished)
Leveridge, C. Tony; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center

This lesson covers the pathologic entities of pulmonary tuberculosis and sarcoidosis, as well as dealing with mycotic infections and coin lesions in the context of granulomatous conditions. The material is highly indexed, facilitating access to specific areas.

optional touch panel;none;first year medical students

HISTORY IN RESPIRATORY DISEASE (shp39;1974;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas

This lesson introduces the student to the symptoms of respiratory disease. The student is shown how to conduct a medical interview and the material is learned by taking a history from a simulated patient.

none;30 minutes;physicians' assistants

INFECTIOUS INFILTRATIVE LUNG DISEASE, PART I (shp129;1975;unpublished)
Stutz, David R; Russell, Lawrence
Sheppard Air Force Base, Texas

This lesson covers the history and the physical exam for patients with pneumonia.

none;45-60 minutes;physicians' assistants

NON-INFECTIOUS INFILTRATIVE LUNG DISEASE (shp103;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas

This lesson discusses non-infectious infiltrative lung diseases: the subjective and objective findings and the treatment principles.

none;45-60 minutes;physicians' assitants

PNEUMOTHORAX AND INTERSTITIAL EMPHYSEMA (pneumo;1977;unpublished)

McCraw, Gordon W; Lawrance, David P; Coalson, J. J.

Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of interstitial emphysema and pneumothorax. The classification schema presented includes that favored by pathologists and that used by clinicians. The material is presented in a highly indexed outline format, facilitating access to specific areas.

optional touch panel;none;first year medical students

Lungs--Dust diseases

INHALATIONAL LUNG DISEASES (inhal;1977;unpublished)

Smith, Terrald J; McCraw, Gordon W; Lawrance, David P

Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of inhalational lung diseases. Sections on pneumoconiosis, extrinsic allergic alveolitis and chemical pneumonitis are presented. These diseases are characterized by damage to the lungs caused by inhalation of dusts (organic or inorganic), fumes or noxious substances.

optional touch panel;none;first year medical students

Lungs--Tumors

TUMORS OF THE RESPIRATORY SYSTEM (ltumor;1977;unpublished)

Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.

Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of tumors of the respiratory system. Diagnostic criteria and possible hormonal syndromes are also considered. A highly indexed outline format is utilized with questions presented to help assess the student's understanding of the material.

optional touch panel;none;first year medical students

Lymphogranuloma venereum

THE MICROBIAL BASIS OF VENEREAL DISEASE (veedx;1976;unpublished)

Ehrhardt, Melvin E

School of Basic Medical Sciences, Univ. of Illinois

This lesson provides an introduction to the identification of venereal diseases, including definitions of syphilis, gonorrhea, lymphogranuloma venereum, chancroid and Donovaniasis. Symptoms, signs, manifestations, and diagnostic tests are covered along with preventative treatment for syphilis.

optional microfiche;none;medical students

Lysosomes

CELL INJURY II: ORGANELLE CHANGES: ACUTE CELL INJURY (cell2;1977;unpublished)

Mergner, Wolfgang; Schiff, Denise

School of Medicine, Univ. of Maryland, Baltimore

This lesson stresses the biochemical and structural changes in acute cell injury, as well as altered organelles. Mitochondrial changes are discussed in detail and compared to changes in the cytosol, nucleus, lysosol, cell membrane and endoplasmic reticulum. Reaction to cell injury is subdivided into three phases: before, at or after the point-of-no-return.

none;45 minutes;first year medical students

Macroeconomics

FISCAL POLICY (macro3;1976;1978)

Paden, Donald W; Wilson, James H; Barr, Michael

Department of Economics, University of Illinois

The lesson examines five alternative fiscal policies from one of doing nothing to several which fully compensate for an assumed decline in aggregate demand. The policies are examined by means of a model which initially assumes an economy with full employment.

none;40 minutes;college/university students

MACROECONOMICS II: TAXES AND GOVERNMENT (macro2;1976;1979)

Paden, Donald W; Wilson, James H; Barr, Michael

Department of Economics, University of Illinois

The purpose of this lesson is to help reinforce the ideas of the first lesson on macroeconomics. Taxes and government are added to the original model to provide a more realistic view of the operation of the economy.

none;none;college/university

MACROECONOMICS:INCOME DETERMINATION - NO GOVERNMENT (macro1;1976;1979)

Paden, Donald W; Wilson, James H; Barr, Michael

Department of Economics, University of Illinois

This lesson reviews macroeconomics. It should help the user understand how the various parts of our macroeconomic system fit together and how decisions with respect to consumption and investment influence the operation of the economy and affect our economic welfare.

none;none;college/university

Macroeconomics--Problems, exercises, etc.

REVIEW QUESTIONS FOR INTRO. TO ECON. ANALYSIS, 3RD HR. EXAM (eco102; 1976;1978)

Paden, Donald W; Barr, Michael

Department of Economics, University of Illinois

This program contains a series of ten multiple choice questions to be used as a review for the third hour examination in a course, "Introduction to Economic Analysis". The questions are on the macroeconomic material in the course. They are reproduced from the book by Donald W. Paden, "Introduction to Economic Analysis", West Publishing Co., 1975.

none;10 minutes;college/university

Magnesium in the body

MACROMINERALS (macmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I

This lesson presents information about macrominerals, or those minerals required in the human diet in amounts exceeding 100 mg. per day. The macrominerals are calcium, phosphorus, magnesium, potassium, sodium, sulphur and chlorine.

none;25-30 minutes;nutrition students

Malabsorption syndromes

MALABSORPTION SYNDROME: SHIRLEY WISP PASSED OUT THIS MORNING (diarrhea;1976;unpublished)
DuPuis, William; Pratt, Raymond; Wong, Ruth; et al.
Abraham Lincoln Medical School, Univ. of Illinois

This lesson is a simulated patient interview, physical and treatment session. Through asking questions and ordering lab tests, etc., the patient's illness is to be diagnosed and treated. Each decision made by the student is scored, whether it be a question asked or a treatment decision. Finally, diagnosis is made and the scores are given.

none;30 minutes;medical students

Malarial fever

ANTIMALARIAL CHEMOTHERAPY (plasmodia;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center

This lesson presents the chemotherapeutic treatment for malarial infection. It includes the drug spectra, modes of action, indications and contraindications. Questions are incorporated for interaction and self-evaluation.

optional touch panel;none;first year medical students

MED. PARASIT. XI: MALARIAL PARASITES & DISEASE (malaria;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson presents information comparing the four major species causing human malaria: Plasmodium falciparum, P. ovale, P. vivax, and P. malariae. The life cycles, laboratory diagnoses, symptomatology, pathogenicity and treatment of the various organisms is presented in a linear format with inserted questions.

none;35 minutes;first year medical students

YELLOW DIRT DOWN IN MY SOUL (yellowdirt;1977;unpublished)
Alora, Angeles; Kemp, Larry; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development

In this simulation, Peter Seaman is a merchant sailor just back from Southeast Asia. He has headache, nausea, and fever, and has noticed that his skin is attaining a pronounced yellow palor. The student is required to gather history, lab and physical data, make a diagnosis and treat the patient.

none;none;medical students

Management

BOSS, A MANAGEMENT SIMULATION (boss;1977;unpublished)
Woodman, William; Miller, Chuck; Battin, Jim
Iowa State University, Ames, Iowa
The program simulates a complex organization: Conglomeron, a mythical corporation in this case. The user is responsible for making decisions within a setting of various competing forces.
none;none;college or university sociology students

Manufactures--Costs

COST CLASSIFICATION (cost2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson analyzes cost classification by designating costs according to the way in which they can be allocated to the product.
none;10-15 minutes;introductory accounting students

JOB-ORDER COSTING (tab3; 1978;unpublished)
McKeown, James C
Department of Accountacy, U of I, Urbana, Ill.
This is to review the elements of job order costing and to give the student practice applying overhead and making the account entries involved in job order costing.
none;60 minutes;introductory accounting students

Marihuana

PHARMACOLOGY OF MARIHUANA (mari;1976;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciencec, Univ. of Illinois
This is a linear lesson which presents information regarding the pharmacology of marihuana as text with inserted questions. The information presented includes: patterns of use; biologic disposition; effects; and aspects of tolerance to and physical dependence on marihuana.
none;20 minutes;first year medical students

Marijuana

see Marihuana

Marketing--Costs

COST CLASSIFICATION (cost2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson analyzes cost classification by designating costs according to the way in which they can be allocated to the product.
none;10-15 minutes;introductory accounting students

NON-MANUFACTURING COSTS (budget2;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson reviews the problems and methods of controlling marketing and administrative costs.
none;60 minutes;introductory accounting students

PROCESS COSTING (cost3;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson is a review of the product costing aspects of cost accounting as used for inventory valuation and income determination and as a basis for pricing.
none;60-90 minutes;introductory accounting students

Masks (Electronics)

CAMGIC: COMP. AIDED MASK GENERATION FOR INTEGRATED CIRCUITS (camgic;1977;1978)
Sinder, Dale R
Electrical Engineering Department, Univ. of Illinois
The object of this lesson is to learn how to generate computer-aided masks for integrated circuits by means of a CAMGIC circuit editor.
none;open-ended;college/university

Mass spectrometry

INTERPRETATION OF MASS SPECTRA (ms;1975;unpublished)
Murov, Steven L
Moorhead State University, Moorhead, Minnesota
The lesson presents the basic principles involved in mass spectrometry, takes the student through the stepwise analysis of four unknowns and then requires the student to carry out a stepwise analysis of an unknown which is a randomly selected substance.
none;none;college and university students of analytic chemistry

Mass (Chemistry)

see Atoms

Mass (Physics)

see Momentum

Maternal-fetal exchange

FETAL CIRCULATION GAME (fetal;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
The lesson is one on the subject of fetal circulation. The student investigates the dictionary definitions of words used in the study of fetal circulation, inspects a series of 17 slides showing the pathways the blood takes as it goes from the placenta, through fetal vesssels, back to the placenta , and then uses the information gained to play a game.
slide selector, microfiche;50-60 minutes;nursing students

FLUIDS AND ELECTROLYTE BALANCE IN THE NEONATE (fluids;1978;unpublished)
Buchholz, Linda M
University of Wisconsin, Madison, Wisconsin
This lesson is designed to acquaint neonatal intensive care personnel with the basic principles involved in fluid and major electrolyte balance of the neonate.
touch panel;none;nursing students

PLACENTAL TRANSFER AND FETAL PHARMACOLOGY (mnurse7;1975;1978)
Bitzer, Maryann; Boudreaux, Martha; Bitzer, Donald
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson illustrates the importance of placental transfer of drugs and disease from mother to fetus, and gives an overview of some present day findings.
none;none;nursing students

Maternity nursing

see Obstetrical nursing

Mathematical notation

SCIENTIFIC NOTATION (scinot;1975;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson explains the use of scientific notation in ordinary mathematical operations and presents problems for the student in exponential notation, writing large and small numbers and handling multiplication and division in scientific notation.
none;44 minutes;college/univ./high school

SCIENTIFIC NOTATION (scienot;1976;1978)
Lederman, Barbara; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and exercises on scientific notation.
none;10-15 minutes;high school students and above

SLIDE RULE (srl;1976;1978)
Lederman, Barbara; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and practice in the use of a slide rule for multiplication and division problems.
slide rule;3.5 hours;students of technical math or physical science

Mathematics
see also Algebra

Mathematics
see also Arithmetic

Mathematics
see also Calculus

Mathematics
see also Fractions

Mathematics
see also Trigonometry

Diagnostic (for chemists)
DIAGNOSTIC QUIZ ON MATH SKILLS FOR CHEMISTRY (mathskills;1977;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson provides the student with a diagnostic review of mathematical skills necessary for use in the study of chemistry. The quiz consists of 16 problems which are graded. The student can go back over the problems after completion in order to study the errors. A four line calculator is provided to assist in the solutions. No instruction.
none;26 minutes;college/university students

Dimensional analysis
CONVERSION FACTORS AND DIMENSIONAL ANALYSIS (dimanal;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson instructs in the techniques of problem-solving by dimensional analysis and the use of conversion factors. Dimensional analysis allows the solution of problems by merely looking at the units involved, setting up conversion factors and converting quantities from one set of units to another.
touch panel;35 minutes;college/university students

Graphic methods

CLOSEUP (closeup;1976;1977)
Schreiner, Axel T
Mathematics Department, University of Illinois
This is a program for the simulation of various approximation methods and provides a general plotting capability for functions and straight lines.
none;open-ended;college/university students

GRAFIT PROGRAMMING FACILITY (grafit;1971;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
GRAFIT is a programmable calculator which graphs the results. The program provides a simple programming language with inherent graphical output, designed to assist science students to compute and graph results for small calculations. The program is a general service type program, not a lesson.
none;open-ended;college/university science students

GRAPHICS (graphics;1976;1977)
Schreiner, Axel T
Mathemetics Department, University of Illinois
This is a program for the creation and modification of geometrical objects such as lines, conic sections and graphs of functions. After creating the geometrical object, the user can then apply transformations (rotations, involutions, etc.). The program accepts a mathematical syntax for the equations to be described as well as all BASIC functions.
none;open-ended;college/university students

MULTCHAR (multchar;1976;1979)
Lekas, Anthony; Gutfreund, Steven
Computer Science Department, U of I
This lesson presents a new way for PLATO lesson authors to design large arrays of characters.
none;open-ended;lesson authors

ROSE (rose;1976;1978)
Sleator, Daniel; Sleator, Tycho
University of Illinois
The first three sections of this lesson generate rose patterns. The final four sections are games: Conway's Game of Life; X,Y Equation Solver Game; Morse Battle Game; Brain-o-Battle.
none;open-ended;none

TECHNIQUES OF IN-LINE ANIMATION (animation;1976;1978)
Parrello, Bruce
University of Illinois
This lesson is an introduction to in-line (as opposed to hard-coded) animation.
none;open-ended;computer programmers

THREE DIMENSIONAL SPACE SURFACE PLOTTER (warp;1979;unpublished)
Lasker, Jeffrey M
University of Connecticut
This lesson projects any segmented function in simulated three-dimensional space. The three-dimensional image is simulated by describing the point of view of the observer with respect to the segmented function in space. Detailed help is included.
none;open-ended;general

Probabilities

INTRODUCTION TO PROBABILITY (ccprob;1978;unpublished)
Baillie, Robert
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
In this lesson you will learn about probability; what it means and what it doesn't mean, and how to compute probabilities of simple events.
none;30 minutes;community college students

PROBABILITY (elstat2;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson will cover the basic definitions and rules in simple probability theory.
none;none;college/university students

PROBABILITY GAME (wmg04;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
A probability game is presented in which the student indicates whether the number the computer presents is the largest, smallest or neither in a list of ten numbers chosen by the computer. Games are short, but one can play successive ones and the score is accumulative.
touch panel optional;2 or 3 minutes;elementary school children

Matrices

COMPUTE (compute;1976;1979)
Fries, Keith L
Dept. of Electrical Engineering, Univ. of Illinois
This program is a service utility designed to provide the user with convenient, user-oriented calculating routines for real valued systems. Help sequences are available throughout the lesson.
none;open-ended;university/college students

COMPUTE HELP (comphelp;1977;1979)
Fries, Keith L
Dept. of Electrical Engineering, U of I, Urbana, Ill.
This is a short lesson describing the techniques that can be used for solving equations; there is also information on how to use them with the 'compute' series of lessons.
none;none;college/university students

DETERMINANTS AND MATRIX CONVERSION (ymatinv;1976;1978)
Tatsuoka, Kikumi; Baillie, Robert
Comp.-based Educ. Res. Lab., Univ. of Ill.
The lesson is one in the series on "Matrix Algebra for Multivariate Statistics". The lesson presents the properties of determinants of a matrix, and ends with exercises for the student.
none;none;college/ university students

EIGENVALUES AND EIGENVECTORS
(yeigen5;1976;1978)
Tatsuoka, Kikumi; Baillie, Robert
Computer-based Educ. Res. Lab., University of Illinois
This lesson is the second in a series of lessons on matrix algebra as applied to multivariate statistics. The lesson deals with eigenvalue problems. A glossary of matrix words is furnished also.
none;60 minutes;college/university undergraduate, graduate students

GENERAL STATISTICS AND MATRIX MANIPULATIONS SUBROUTINE PACK.
(genstat;1977;1978)
Kraatz, James M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson contains several utility programs for performing matrix manipulations and is of particular use to those interested in the area of multivariate statistics. The programs have been designed to be accessed via the -use- command.
none;open-ended;none

INTRODUCTION TO MATRICES -- SIMPLE OPERATIONS (yeigen4;1976;1978)
Tatsuoka, Kikumi
Computer-based Educ. Res. Lab., University of Illinois
This lesson is the first in a series of lessons on matrix algebra as applied to multivariate statistics. The lesson deals with simple operations with matrices such as transpositions, addition, subtraction and scalar multiplication.
none;20 minutes;college/university undergraduate and graduate students

MATRICES AND LINEAR TRANSFORMATIONS
(ytrans; 1976;1978)
Tatsuoka, Kikumi; Baillie, Robert
Computer-based Educ. Res. Lab., University of Illinois
This lesson is the fourth in a series of lessons on matrix algebra as applied to multivariate statistics. The lesson deals with matrices and linear tranformations.
none;60 minutes;college/university undergraduate and graduate students

THE MATRIX CALCULATOR (calc21;1973;1977)
Parrello, Bruce
University of Illinois
This lesson consists primarily of a calculator designed for performing routine operations on matrices.
none;open-ended;freshman/sophomore college

MATRIX MULTIPLICATION
(ymult2;1976;1978)
Tatsuoka, Kikumi
Computer-based Educ. Res. Lab., University of Illinois
This lesson is the third in a series of lessons on matrix algebra as applied to multivariate statistics. The lesson deals with the multiplication of matrices.
none;40 minutes;college/university undergraduate and graduate students

THE METRIC TENSOR (metens;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
The lesson, number four in the Elementary Crystallography course, describes the metric tensor and its use in the calculation of bond angles, bond distances, and other geometrical relationships. The lesson ends by turning the PLATO computer into a calculator which uses matrix algebra to make geometric calculations in a general crystallographic system.
none;none;college and university undergraduate and graduate students

MULTITRAIT MULTIMETHOD MATRICES (mmmatrixx;1974;unpublished)
Cohen, Jerry L; Klesh, John R
Psychology Department, University of Illinois
This lesson teaches the use of Multitrait Multimethod Matrices as a somewhat idealized procedure for validating measurement instruments. The matrix contains all of the intercorrelations which result when each of several traits is measured by each of several methods.
none;none;psychology students

MULTIVARIATE ANALYSIS PACKAGE (multvar;1977;1978)
Kraatz, James M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson is a multivariate analysis package including multiple correlation and regression, discriminant analysis, general matrix manipulations and factor rotations.
none;open-ended;college/university students

PL/I ARRAYS (ADVANCED MATERIAL) (pl1arrayx;1975;1978)
Jauregui, Luis H; Friedman, H. George
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
This lesson contains three advanced example programs using arrays. The examples are not suited to introductory students. The lesson contains appropriate exercises.
none;25 hours for series;college/jr. college

REVIEW OF MATRICES (matx;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL
The lesson, besides being a review of matrices, includes matrix calculations needed to carry out the calculations in Lessons IV-VIII of the course in Elementary Crystallography. A matrix inversion program uses the PLATO computer and the last section provides a working computer program for the solution of three simultaneous equations in three unknowns.
none;none;college and university undergraduate and graduate students

Matrix inversion

REVIEW OF MATRICES (matx;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL
The lesson, besides being a review of matrices, includes matrix calculations needed to carry out the calculations in Lessons IV-VIII of the course in Elementary Crystallography. A matrix inversion program uses the PLATO computer and the last section provides a working computer program for the solution of three simultaneous equations in three unknowns.
none;none;college and university undergraduate and graduate students

Meat inspection

ANTEMORTEM AND POSTMORTEM INSPECTION PROCEDURES (apip;1974;unpublished)
Grimes, George M; Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois
The purpose of the lesson is to help the student learn how to perform antemortem and postmortem inspections using proper procedures in accordance with the U. S. Department of Agriculture regulations. The student should be able to recognize and prescribe humane slaughter procedures and proper facilities and equipment for making the inspections.
slide selector, microfiche;2 hours;professonal students of veterinary medicine

Mechanics

see Classical mechanics

Mechanics

see Quantum mechanics

Mechanics

see Wave mechanics

Mechanics--Notation

VECTORS (show;1973,1974;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois

The purpose of this lesson is to give students help in gaining a working understanding of vectors. A review of graphing in x-y coordinates and of sines and cosines is included. A knowledge of vectors and vector notation is extremely important in the study of physics because it provides a compact way to express spatial relationships.

none;50 minutes;college/university students of introductory physics

Medical ethics

DEATH AND DYING: PSYCH. MANAGEMENT OF THE TERMINAL PATIENT (death;1976;unpublished)
Ruggieri, Pamela J; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development

This lesson provides a short introduction to the work of Kubler-Ross, followed by a didactic simulation of counseling a terminal patient, Mr. Kraft. Mr. Kraft makes statements and the student must pick from the replies provided. Analysis questions are asked about each of the choices. The case is summarized at the end.

none;none;medical students, any health professional

DISCUSSION LEADING TECHNIQUES (discuss;1978;unpublished)
Browdy, Marshall; Coleman, Ronald
U of I Medical School, Cntr. for Ed. Development

This lesson presents various techniques a discussion leader might use, regardless of subject matter, to guide and facilitate a small group discussion. It is stressed that the methods used by a group leader to encourage spontaneous interactions are important.

microfiche;20-25 minutes;medical students, general audience

MEDICAL LEGAL PROBLEMS III: GOOD SAMARITAN STATUTES (medleg3;1976;unpublished)
Ehrhardt, Melvin E; Bunch, Mary J
School of Basic Medical Sciences, Univ. of Illinois

The Illinois Revised Statutes concerning emergency care to injured persons are presented in this lesson. Situational questions relate the statutes to incidents which frequently occur.

none;10 minutes;medical students

MEDICAL LEGAL PROBLEMS II: SEXUAL ABUSE (medleg2;1976;unpublished)
Ehrhardt, Melvin E; Brenner, Lisa
School of Basic Medical Sciences, Univ. of Illinois

The Illinois Statutes concerning sexual abuse are discussed in this lesson. Definitional and situational questions attempt to relate the statutes to clinical practice in an emergency room and office setting.

none;10-15 minutes;medical students

MEDICAL LEGAL PROBLEMS IV: THE ABUSED AND NEGLECTED CHILD
(childabuse;1978;unpublished)
Ehrhardt, Melvin E; Costigan, Joe; Green, Michael
School of Basic Medical Sciences, Univ. of Illinois
The provisions of the Illinois Abused and Neglected Child Reporting Act are presented in this lesson. Questions are provided to ensure knowledge of the act and its implications in real situations. Case studies lead the student as physician through identification, reporting, and follow-up for cases involving possible neglect and abuse.
none;10-15 minutes;medical students

MEDICAL LEGAL PROBLEMS I: AGE OF CONSENT (medlegl;1976;unpublished)
Ehrhardt, Melvin E; Brenner, Lisa
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents the Illinois Revised Statutes concerning age of consent, and relates these statutes to the real world through a series of situational problems.
none;15 minutes;medical students

MUMBLE BERRY NEEDS A DR.: COMM. ORG. IN MEDICINE (drsearch;1977;unpublished)
Westover, Paul; Nelson, Charles D; Kemp, Larry
University of Colorado / University of Illinois
In this lesson the student is required to make a series of decisions in community organization tactics to recruit a doctor for a small town. The lesson ends with either the recruitment of a doctor or failure to recruit a doctor, depending on the tactics used.
none;none;medical students

OBSTETRICIAN-GYNECOLOGIST AS SEX EDUCATOR (sexed;1978;unpublished)
Lavanhar, Patricia; Pepper, George; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development
This lesson covers six areas of physical diagnosis where the practitioner can be of service to the patient in sex education: attitude, history, physical pelvic exam, etc. The format is highly interactive, involving essay, true/false, short answer and multiple choice questions. A pretest and post-test enable measure of learning.
none;30-45 minutes;medical students

Medical history taking

HISTORY IN RESPIRATORY DISEASE (shp39;1974;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson introduces the student to the symptoms of respiratory disease. The student is shown how to conduct a medical interview and the material is learned by taking a history from a simulated patient.
none;30 minutes;physicians' assistants

PROBLEM SOLVING IN CLINICAL MEDICINE: CHECKUP (feinz8;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 53-year-old woman who wants a "check-up" after 12 years with another doctor. The user is a student physician working for an ambulatory care facility who has been assigned to this woman. Choices are made from options provided and each selection is discussed.
none;none;medical students

PROBLEM-ORIENTED MEDICAL RECORDS (shp37;1974;unpublished)
Stutz, David R; Romanchek, James
Sheppard Air Force Base, Texas
This lesson teaches the student to record and organize the material in a medical chart according to the patient's problems.
none;20-30 minutes;physicians' assistants

SIMULATED PATIENT ENCOUNTER (shp79;1973;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson provides a clinical simulation in which the student takes a medical history, performs a physical exam, requests laboratory tests to be run, makes a diagnosis and consults with the patient.
none;1-2 hours;physicians' assistants

Medical laws and legislation

MEDICAL LEGAL PROBLEMS III: GOOD SAMARITAN STATUTES (medleg3;1976;unpublished)
Ehrhardt, Melvin E; Bunch, Mary J
School of Basic Medical Sciences, Univ. of Illinois
The Illinois Revised Statutes concerning emergency care to injured persons are presented in this lesson. Situational questions relate the statutes to incidents which frequently occur.
none;10 minutes;medical students

MEDICAL LEGAL PROBLEMS II: SEXUAL ABUSE (medleg2;1976;unpublished)
Ehrhardt, Melvin E; Brenner, Lisa
School of Basic Medical Sciences, Univ. of Illinois
The Illinois Statutes concerning sexual abuse are discussed in this lesson. Definitional and situational questions attempt to relate the statutes to clinical practice in an emergency room and office setting.
none;10-15 minutes;medical students

MEDICAL LEGAL PROBLEMS IV: THE ABUSED AND NEGLECTED CHILD (childabuse;1978;unpublished)
Ehrhardt, Melvin E; Costigan, Joe; Green, Michael
School of Basic Medical Sciences, Univ. of Illinois

The provisions of the Illinois Abused and Neglected Child Reporting Act are presented in this lesson. Questions are provided to ensure knowledge of the act and its implications in real situations. Case studies lead the student as physician through identification, reporting, and follow-up for cases involving possible neglect and abuse.

none;10-15 minutes;medical students

MEDICAL LEGAL PROBLEMS I: AGE OF CONSENT (medlegl;1976;unpublished)
Ehrhardt, Melvin E; Brenner, Lisa
School of Basic Medical Sciences, Univ. of Illinois

This lesson presents the Illinois Revised Statutes concerning age of consent, and relates these statutes to the real world through a series of situational problems.

none;15 minutes;medical students

Medical microbiology

BACTERIAL TERMINOLOGY REVIEW: CELL MORPHOLOGY (microterm;1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois

The lesson reviews basic terminology associated with bacterial cell morphology. In a linear, interogative format, terms associated with internal bacterial cell structures, the bacterial cell envelope, bacterial cell appendages, and spore formation are presented or reviewed.

none;35 minutes;first year medical students

BACTERIAL TERM.:GROWTH, GENETICS, PATHOGENICITY (bacterm; 1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois

The lesson presents and reviews basic terminology associated with bacterial growth cycle, bacterial genetics (e.g. transformation, transduction, conjugation), and pathogenicity (e.g. virulence, toxins). Student performance within the module is presented upon completion.

none;20 minutes;first year medical students

BASIC VIROLOGY IIA: VIRAL MULT. (ADSORP. THROUGH ECLIPSE) (kvirus2;1975;unpublished)
Wagner, Kenneth; Cohen, Paul; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois

The lesson is a combination of linear and quiz formats. Information concerning the viral multiplication phases, adsorpton, penetration, and eclipse of both animal viruses and bacteriphages are accessed via a quiz on a textual and diagrammatic instructional section. The student may be branched to instructional material based upon quiz results.

none;20 minutes;first year medical students

BASIC VIROLOGY IIB: VIRAL MULT. (REPLICATION THRU RELEASE)
(kvirus3;1975;unpublished)
Wagner, Kenneth; Cohen, Paul; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
The viral multiplication phases, replication, maturation and release, of both animal viruses and bacteriophages are presented, either in a quiz over each phase, or in a textual and diagrammatic instructional section. The process of lysogeny is discussed in the release phase. After the quiz, the student may be urged to study instructional material.
none;20 minutes;first year medical students

BASIC VIROLOGY III: VIRAL DIAGNOSTIC TECHNIQUES (kvirus4;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents information the physician must consider for appropriate specimen collection in suspected viral infections. Via tutorial and quiz formats, various tests are utilized in diagnosing viral infections and the interpretation of the test results are presented.
none;20 minutes;first year medical students

BASIC VIROLOGY IVA: MAJ. VIRAL GROUPS, SMALL DNA (kvirus5a;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents to the student in a linear interrogative format, information dealing with small-size DNA viral groups such as Papovavirus and Hepatites. A short history, structural characteristics, classification, and diseases caused are given for each group. A diagnostic review quiz over the two viral groups is also available.
none;20 minutes;first year medical students

BASIC VIROLOGY IVB: MAJ. VIRAL GROUPS, MEDIUM DNA VIRUSES
(kvirus5b;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents to the student in a linear interrogative format, information dealing with medium-size DNA virus groups such as Adenoviruses and Herpesviruses. Parvoviruses are included in the adenovirus discussion. A short history, structural characteristics, morphology, classification, and diseases caused are given for each group. Quiz available.
slide selector, microfiche (optional);20 minutes;first year medical students

BASIC VIROLOGY IVC: MAJ. VIRAL GROUPS, LARGE DNA (kvirus5c;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents to the student in a linear interrogative format, information dealing with large-size DNA viruses such as Poxviruses. A short history, structural characteristics, morphology, classification, and diseases caused are given. A diagnostic review quiz over poxviruses is also available.
slide selector, microfiche (optional);20 minutes;first year medical students

BASIC VIROLOGY I: STRUCTURAL CHARACTERISTICS OF THE VIRION (kvirus;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Scieneces, Univ. of Illinois
The lesson presents basic information concerning viral morphology, e.g. capsids, capsomeres, nucleocapsids, and information concerning the various symmetries exhibited by virus particles, e.g. icosahedral, helical, complex, and 5:3:3: rotational symmetry.
slide selector, microfiche;20 minutes;first year medical students

GENERAL PARASITOLOGY TERMINOLOGY (paraterm; 1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
The lesson reviews basic general parasitology terminology. Such terms as those relating parasitism to other symbiotic relationships, those relating various parasitic states and parasite types, and those relating host and vector categories are presented in a linear format of text with inserted questions.
none;10 minutes;first year medical students

MEDICAL PARASITOLOGY II: PATHOGENIC AMOEBAE (ameba2;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
In addition to general amoebae characteristics, the lesson covers the morphology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment of pathogenic amoebae belonging to the genera Dientamoeba, Entamoeba, and Naegleria in an interrogative linear format. A review quiz over commensal and/or pathogenic amoebae is available.
none;none;none

MEDICAL PARASITOLOGY IX: AMERICAN TRYPANOSOMIASIS (tryp2;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson teaches the general morphological characteristics of hemoflagellates, the life cycle, laboratory diagnoses, pathogenicity, symptomatollogy and treatment of Chagas' Disease. The lesson format is linear with textual presentation with inserted questions.
none;35 minutes;first year medical students

MEDICAL PARASITOLOGY I: COMMENSAL AMOEBAE (amebal; 1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
In addition to information on general amoebae characteristics, the lesson covers the morphology, life cycle, laboratory diagnosis, pathogenicity, symptomatology and treatment, where necessary, of amoebae often found in man and confused with pathogenic species. The commensal amoebae genera: Endolimarc, Entamoeba and Iodamoeba, are described.
none;10 minutes;first year medical students

MEDICAL PARASITOLOGY VIII: AFRICAN TRYPANOSOMIASIS (trypl; 1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson teaches, and where applicable, compares the general morphological characteristics, the life cycle, laboratory diagnosis, pathogenicity, symptomatology and treatment of Rhodesian and Gambian sleeping sickness. Sectional materials (e.g. treatment) are textual with inserted questions.

none;15 minutes;first year medical students

MEDICAL PARASITOLOGY VI: TISSUE AND LUMEN-DWELLING CILIATES (cilia;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

Incorporated into this lesson in a linear interrogative format is the information on general ciliate characteristics and on thermophology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment of the pathogen, Balantidium coli. A diagnostic quiz over the material is also available for those interested in reviewing.

none;5 minutes;first year medical students

MEDICAL PARASITOLOGY X: LEISHMANIASIS (leish; 1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson presents the hemoflagellate characteristics, and compares the life cycles, laboratory diagnoses, pathogenicity, symptomatology and treatments of cutaneous, mucocutaneous, and visceral leishmaniases. A linear format with inserted questions may be accessed for the diseases or only text may be accessed for category comparison.

none;15 minutes;first year medical students

MEDICAL PARASIT. VII: TISSUE AND LUMEN-DWELLING FLAGELLATES (flag;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciencec, Univ. of Illinois

Through a linear interrogative format, information on parasitic lumen-dwelling flagellates is presented. The morphology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment are discussed in relation to the various organisms. In addition, a diagnostic review quiz is accessible from the index.

none;35 minutes;first year medical students

MED. PARASITOLOGY IV: PARASITIC SPOROZOANS (PART I): (sporz2;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

General sporozoan characteristics are briefly reviewed followed, in an interrogative linear format, by a relatively detailed presentation on the morphology, life cycle, laboratory diagnosis, pathogenicity, symptomatology and treatment of Babesia species and Toxoplasma gondii. A diagnostic review over parasitic sporozoans is also accessible.

none;5 minutes;first year medical students

MED. PARASITOLOGY V: PARASITIC SPOROZOANS (PART II) (sporz3;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

General sporozoan characteristics are briefly reviewed followed, in an interrogative linear format, by a presentation on the morphology, life cycle, laboratory diagnosis, pathogenicity, symptomology and treatment of Isospora species, Pneumocystis carinii and Sarcocystis lindemanni. A diagnostic review quiz over parasitic sporozoans is accessible.

none;5 minutes;first year medical students

MED. PARASIT. III: TYPICAL SPOROZOAN LIFE CYCLE (sporz1;1975;unpublished)
Wagner, Kenneth; Cohen, Paul; Bohn, Robert
School of Basic Medical Sciences, Univ. of Illinois

This module is designed to allow either a step-by-step explanation, utilizing PLATO graphics, of a life cycle exhibited in part or whole by members of the Sporozoa, or to allow a review of the material by taking a quiz over the terms, definitions, and sequences of the stages in the cycle.

none;5 minutes;first year medical or microbiology students

MED. PARASIT. XI: MALARIAL PARASITES & DISEASE (malaria;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson presents information comparing the four major species causing human malaria: Plasmodium falciparum, P. ovale, P. vivax, and P. malariae. The life cycles, laboratory diagnoses, symptomatology, pathogenicity and treatment of the various organisms is presented in a linear format with inserted questions.

none;35 minutes;first year medical students

MICROBIAL TOXINS III: CLINICAL CASES (microtox3;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois

Three clinical toxemias are presented for diagnosis by the student. Such aspects as symptoms, pathogenesis, and treatment are emphasized.

slide selector, microfiche;15 minutes;first year medical students

MICROBIAL TOXINS II: BACTERIAL TOXINS (microtox2;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
The lesson is the second in the series on pathogenicity through toxin production. This lesson reviews information on bacterial toxins concerning general properties, toxicity, and immunology.
slide selector, microfiche;20 minutes;first year medical students

MICROBIAL TOXINS I: ALGAL AND FUNGAL SPECIES (microtox;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
The lesson is one of a series on pathogenicity through toxin production. Basic and clinical information concerning algal and fungal toxins is presented. The purpose of the lesson is to make the student aware of such toxins, which are often ignored in favor of bacterial toxins.
slide selector, microfiche;10 minutes;first year medical students

MICROLOGUE II: GRAM POSITIVE COCCI, PART I (microlog2a;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson discusses the group of bacteria classified as gram positive cocci. The study includes patient dialogue and the pathophysiology and etiology of upper respiratory infections. A discussion of stains used in microbiology is also included.
none;15 minutes;first year medical students

MICROLOGUE I: GRAM NEGATIVE RODS (micrologla;1977;unpublished)
Gabridge, Michael G; Ngo, P P
School of Basic Medical Sciences, Univ. of Illinois
This lesson discusses a group of bacteria classified as gram negative rods. The study includes patient dialogue and specimen selection and the pathophysiology and etiology of the organisms are considered. A discussion of selective media and diagnostic tests, including KIA reactions, follows a logic flow for identification of these organisms.
microfiche;none;first year medical students

PARASITIC METAZOAN TERMINOLOGY (metaterm;1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
With respect to four groups of medically important parasitic metazoa, i.e. trematodes, cestodes, nematodes, and arthropods, the lesson reviews terms commonly associated with morphology and the life cycles in a linear format of text with inserted questions.
none;5 minutes;first year medical students

PARASITIC PROTOZOAN TERMINOLOGY (prototerm;1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
With respect to the four major groups of medically important parasitic protozoa, i.e. amoebae, ciliates, flagellates, sporozoans, the lesson reviews terms commonly associated with the morphology, nutrition, excretion, and life cycles in a linear format of text with inserted questions.
none;5 minutes;first year medical students

QUIZ ON MEDICAL PROTOZOAN PARASITOLOGY (paraquiz;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson is a self-assessment mechanism for the student to determine his/her knowledge of protazoans of medical importance. Questions concerning general characteristics, life cycles, diagnoses, symptoms and pathology, and treatments of the various species are presented. Evaluation and diagnosis are provided upon completion of the quiz.
none;25 minutes;first year medical students

REVIEW OF LABORATORY MYCOLOGY FOR LABORATORY TECHNOLOGISTS (miccarlel;1976;unpublished)
Koehler, Janice Herbeck
Carle Foundation Hospital, Urbana, Illinois
This is a self-assessment exercise for laboratory technology students which tests knowledge of clinical mycology. Terminology, media and environment, and organisms are covered.
none;open-ended;students of medical technology

Medical microbiology--Examinations, questions, etc.

MICROQUIZ II: GASTROINTESTINAL INFECTIONS (gastroquiz;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson is in a quiz-game format and reviews topics of habitat, transmission, morphology, growth, diagnostic techniques, immunology, pathogenicity, and chemotherapy of gastrointestinal infectious agents such as protozoa, helminths, salmonella, shigella, coliform, bacilli, and enteric bacilli.
none;20 minutes;first year medical students

MICROQUIZ I: RESPIRATORY INFECTIONS (uriquiz;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson is in a quiz-game format and reviews topics of habitat, transmission, morphology, growth, diagnostic techniques, immunology, pathogenicity, and chemotherapy of respiratoy disease agents such as RNA viruses, fungi, mycobacteria, diphtheria, haemophilus, mycoplasma, cocci, and chlamydia.
none;20 minutes;first year medical students

Medical mycology

REVIEW OF LABORATORY MYCOLOGY FOR LABORATORY TECHNOLOGISTS (miccarle1;1976;unpublished)
Koehler, Janice Herbeck
Carle Foundation Hospital, Urbana, Illinois

This is a self-assessment exercise for laboratory technology students which tests knowledge of clinical mycology. Terminology, media and environment, and organisms are covered.

none;open-ended;students of medical technology

Medical parasitology

MEDICAL PARASITOLOGY II: PATHOGENIC AMOEBAE (ameba2;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

In addition to general amoebae characteristics, the lesson covers the morphology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment of pathogenic amoebae belonging to the genera Dientamoeba, Entamoeba, and Naegleria in an interrogative linear format. A review quiz over commensal and/or pathogenic amoebae is available.

none;none;first year medical students

MEDICAL PARASITOLOGY IX: AMERICAN TRYPANOSOMIASIS (tryp2;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson teaches the general morphological characteristics of hemoflagellates, the life cycle, laboratory diagnoses, pathogenicity, symptomatollogy and treatment of Chagas' Disease. The lesson format is linear with textual presentation with inserted questions.

none;35 minutes;first year medical students

MEDICAL PARASITOLOGY I: COMMENSAL AMOEBAE (ameba1; 1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

In addition to information on general amoebae characteristics, the lesson covers the morphology, life cycle, laboratory diagnosis, pathogenicity, symptomatology and treatment, where necessary, of amoebae often found in man and confused with pathogenic species. The commensal amoebae genera: Endolimarc, Entamoeba and Iodamoeba, are described.

none;10 minutes;first year medical students

MEDICAL PARASITOLOGY VIII: AFRICAN TRYPANOSOMIASIS (tryp1; 1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson teaches, and where applicable, compares the general morphological characteristics, the life cycle, laboratory diagnosis, pathogenicity, symptomatology and treatment of Rhodesian and Gambian sleeping sickness. Sectional materials (e.g. treatment) are textual with inserted questions.

none;15 minutes;first year medical students

MEDICAL PARASITOLOGY VI: TISSUE AND LUMEN-DWELLING CILIATES (cilia;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
Incorporated into this lesson in a linear interrogative format is the information on general ciliate characteristics and on thermophology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment of the pathogen, Balantidium coli. A diagnostic quiz over the material is also available for those interested in reviewing.
none;5 minutes;first year medical students

MEDICAL PARASITOLOGY X: LEISHMANIASIS (leish; 1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents the hemoflagellate characteristics, and compares the life cycles, laboratory diagnoses, pathogenicity, symptomatology and treatments of cutaneous, mucocutaneous, and visceral leishmaniases. A linear format with inserted questions may be accessed for the diseases or only text may be accessed for category comparison.
none;15 minutes;first year medical students

MEDICAL PARASIT. VII: TISSUE AND LUMEN-DWELLING FLAGELLATES (flag;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciencec, Univ. of Illinois
Through a linear interrogative format, information on parasitic lumen-dwelling flagellates is presented. The morphology, life cycle, laboratory diagnosis, pathology, symptomatology and treatment are discussed in relation to the various organisms. In addition, a diagnostic review quiz is accessible from the index.
none;35 minutes;first year medical students

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Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
General sporozoan characteristics are briefly reviewed followed, in an interrogative linear format, by a relatively detailed presentation on the morphology, life cycle, laboratory diagnosis, pathogenicity, symptomatology and treatment of Babesia species and Toxoplasma gondii. A diagnostic review over parasitic sporozoans is also accessible.
none;5 minutes;first year medical students

MED. PARASITOLOGY V: PARASITIC SPOROZOANS (PART II) (sporz3;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

General sporozoan characteristics are briefly reviewed followed, in an interrogative linear format, by a presentation on the morphology, life cycle, laboratory diagnosis, pathogenicity, symptomology and treatment of Isospora species, Pneumocystis carinii and Sarcocystis lindemanni. A diagnostic review quiz over parasitic sporozoans is accessible.

none;5 minutes;first year medical students

MED. PARASIT. III: TYPICAL SPOROZOAN LIFE CYCLE (sporz1;1975;unpublished)
Wagner, Kenneth; Cohen, Paul; Bohn, Robert
School of Basic Medical Sciences, Univ. of Illinois

This module is designed to allow either a step-by-step explanation, utilizing PLATO graphics, of a life cycle exhibited in part or whole by members of the Sporozoa, or to allow a review of the material by taking a quiz over the terms, definitions, and sequences of the stages in the cycle.

none;5 minutes;first year medical or microbiology students

MED. PARASIT. XI: MALARIAL PARASITES & DISEASE (malaria;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson presents information comparing the four major species causing human malaria: Plasmodium falciparum, P. ovale, P. vivax, and P. malariae. The life cycles, laboratory diagnoses, symptomatology, pathogenicity and treatment of the various organisms is presented in a linear format with inserted questions.

none;35 minutes;first year medical students

QUIZ ON MEDICAL PROTOZOAN PARASITOLOGY (paraquiz;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson is a self-assessment mechanism for the student to determine his/her knowledge of protazoans of medical importance. Questions concerning general characteristics, life cycles, diagnoses, symptoms and pathology, and treatments of the various species are presented. Evaluation and diagnosis are provided upon completion of the quiz.

none;25 minutes;first year medical students

Medical parasitology--Examinations, questions, etc.

QUIZ ON MEDICAL PROTOZOAN PARASITOLOGY (paraquiz;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson is a self-assessment mechanism for the student to determine his/her knowledge of protazoans of medical importance. Questions concerning general characteristics, life cycles, diagnoses, symptoms and pathology, and treatments of the various species are presented. Evaluation and diagnosis are provided upon completion of the quiz.

none;25 minutes;first year medical students

Medical parasitology--Terminology

GENERAL PARASITOLOGY TERMINOLOGY (paraterm; 1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois

The lesson reviews basic general parasitology terminology. Such terms as those relating parasitism to other symbiotic relationships, those relating various parasitic states and parasite types, and those relating host and vector categories are presented in a linear format of text with inserted questions.

none;10 minutes;first year medical students

PARASITIC METAZOAN TERMINOLOGY (metaterm;1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois

With respect to four groups of medically important parasitic metazoa, i.e. trematodes, cestodes, nematodes, and arthropods, the lesson reviews terms commonly associated with morphology and the life cycles in a linear format of text with inserted questions.

none;5 minutes;first year medical students

PARASITIC PROTOZOAN TERMINOLOGY (prototerm;1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois

With respect to the four major groups of medically important parasitic protozoa, i.e. amoebae, ciliates, flagellates, sporozoans, the lesson reviews terms commonly associated with the morphology, nutrition, excretion, and life cycles in a linear format of text with inserted questions.

none;5 minutes;first year medical students

Medical protozoology

CHEMOTHERAPY OF AMEBIASIS (amoeba;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center

This lesson presents the chemotherapeutic treatment for Entamoeba histolytica infection. It includes modes of action, toxicities and contraindications. Questions are incorporated for interaction.

optional touch panel;20 minutes;first year medical students

CHEMOTHERAPY OF MISCELLANEOUS PROTOZOAN INFECTIONS (mispro;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment of miscellaneous protozoan infections. It includes the drug spectra, modes of action, indications and contraindications. Questions are included for interaction and self-evaluation.
optional touch panel;45 minutes;first year medical students

Medical screening

INTRO. TO PRINCIPLES OF SCREENING FOR DISEASE (screentest;1977;unpublished)
Morton, Richard; Schuldenfrei, Jeffrey
School of Medicine, Univ. of Maryland, Baltimore
This lesson contrasts screening with diagnosis and concentrates on definitions of sensitivity and specificity. Graphic examples are shown of the reciprocal relationship between the two measures, and several numerical problems are provided. The clinical approach of false positives and negatives is integrated into the lesson.
none;none;medical students

Medical statistics

STATISTICAL SIGNIFICANCE (statsig;1977;unpublished)
Hebel, Richard; Lovick, Chester
School of Medicine, Univ. of Maryland, Baltimore
This lesson presents statistical principles useful in assessing biomedical data. It emphasizes the use of statistical tests as well as the difference between the statistical significance of a result and its importance in practical application.
none;10 minutes;medical students

Medical technology

ALLERGENS--THEIR NATURE AND DISTRIBUTION (shp75;1975;unpublished)
Roseman, Gerald J
Sheppard Air Force Base, Texas
In this lesson the student will learn what substances are allergens, where allergens are commonly found, when people are exposed to allergens and how response to allergens varies.
none;30-45 minutes;physicians' assistants

ALLERGY MECHANISM AND BASIC ALLERGY TERMINOLOGY (shp49;1975;unpublished)
Roseman, Gerald J
Sheppard Air Force Base, Texas
This lesson will enable the student to become familiar with the terminology used to describe the allergy mechanism, to differentiate between stages of this mechanism and to name the tissues affected in allergy and their physiological response.
none;90 minutes;physicians' assistants

ANATOMICAL REFERENCE TERMINOLOGY (shp56;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson will teach the student to name the "standard position" of the body for proper anatomical reference, the correct anatomical reference terms based upon descriptive phrases displayed with appropriate drawings, and the three anatomical "planes of reference". A "matching drill" of twelve anatomical reference definitions is included.
none;20-30 minutes;physicians' assistants

ANTIMICROBIAL CHEMOTHERAPY (shp66;1975;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson discusses the general concepts of antimicrobial chemotherapy and the currently available compounds that can be effective in the treatment of infectious diseases.
none;45-60 minutes;physicians' assistants

BASIC METRIC CONVERSIONS (shp12;1974;unpublished)
Mosley, Richard L
Sheppard Air Force Base, Texas
This lesson will teach the student to convert fractions to decimal expression and metric measurements of weight, length and volume to their subdivisions of metric form. The student will also learn to calculate the amount of medication to administer to a patient, given the doctor's order and the amount of medication in each tablet.
none;20-30 minutes;physicians' assistants

BEHAVIOR OF GASES (shp63;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas
This lesson discusses the properties of gases and their measurement and the pressure, volume and temperature relationships.
none;60 minutes;physicians' assistants

BIOSYNTHESIS OF PROTEIN (shp8;1974;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas
This lesson will describe the main sequence of events leading to the synthesis of nucleic acids and protein in the cell, identify the roles played by the nucleic acids in the biosynthesis of protein, and predict the effect of point mutations on protein primary structure.
none;60 minutes;physicians' assistants

CHRONIC BRONCHITIS (shp108;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas

This lesson presents the one major factor in developing chronic bronchitis. The student will also learn to determine whether or not an individual has chronic bronchitis and what are the proper modes of therapy for the patient.

none;60-90 minutes;physicians' assistants

CLINICAL CHEMISTRY COMPREHENSIVE EXAM. PART I (bbcarle1;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois

This lesson provides a self-assessment exam for laboratory technology students covering clinical chemistry, instrumentation, equipment, mathematics, carbohydrates and lipids.

optional touch panel;open-ended;students of laboratory technology

CLINICAL CHEMISTRY COMPREHENSIVE EXAM. PART II (bbcarle2;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois

This lesson provides a self-assessment exam for laboratory technology students in clinical chemistry covering liver function, endocrinology, protein and non-protein nitrogen, enzymes, electrolytes and acid/base.

optional touch panel;open-ended;students of laboratory technology

DIFFUSION OF GASES (shp68;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas

This lesson discusses the diffusion of gases by dissolution in a liquid, specifically the dissolution of respiratory gases in the blood and subsequent diffusion in the lungs.

none;2 hours;physicians' assistants

FUNCTIONAL MECHANICS OF VENTILATION (shp30;1974;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas

This lesson dicusses the muscular-skeletal interaction in ventilation, the basic embryological development of the pleural cavity, respiratory pressures, pulmonary volumes and capacities, and alveolar ventilation.

none;4 1/2 hours;physicians' assistants

GAS TRANSPORT IN BLOOD (shp89;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas

This lesson focuses on the normal transport of respiratory gases in the blood.

none;2 hours;physicians' assistants

GROSS ANATOMY OF THE THORACIC CAGE (shp90;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson presents the anatomy of the thoracic cage.
none;90 minutes;physicians' assistants

HISTAMINE AND ANTIHISTAMINES (shp111;1975;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson presents information about the definition, formation, release, pharmacology and physiology of histamines, and the mechanism of action, pharmacology, therapeutic uses and side effects of antihistamines. Decongestants are discussed in relation to allergic rhinitis.
none;2 hours;physicians' assistants

HISTORY IN RESPIRATORY DISEASE (shp39;1974;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson introduces the student to the symptoms of respiratory disease. The student is shown how to conduct a medical interview and the material is learned by taking a history from a simulated patient.
none;30 minutes;physicians' assistants

INFECTIOUS INFILTRATIVE LUNG DISEASE, PART I (shp129;1975;unpublished)
Stutz, David R; Russell, Lawrence
Sheppard Air Force Base, Texas
This lesson covers the history and the physical exam for patients with pneumonia.
none;45-60 minutes;physicians' assistants

INTRODUCTION TO RESPIRATION AND VENTILATION (shp65;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson defines the processes of respiration and ventilation, illustrates the principles that explain how ventilation occurs, provides an introduction to the anatomical components of the respiratory system, and introduces the topographical anatomy of the lungs.
none;60-90 minutes;physicians' assistants

LABORATORY TESTS (shp14;1974;unpublished)
Lacoe, Robert E; Kimball, R M
Sheppard Air Force Base, Texas
This lesson discusses the Rh-hr system and stresses the importance of this system in the practice of medicine. The student then uses this information in a simulated test.
none;7.5 hours;physicians' assistants

NON-INFECTIOUS INFILTRATIVE LUNG DISEASE (shp103;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas
This lesson discusses non-infectious infiltrative lung diseases: the subjective and objective findings and the treatment principles.
none;45-60 minutes;physicians' assistants

NOXIOUS DRUGS (shp33;1974;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson discusses drug classes and individual drugs exhibiting toxic manifestations in the respiratory system.
none;60 minutes;physicians' assistants

PHYSICAL EXAMINATION OF THE RESPIRATORY SYSTEM (shp73;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson teaches the general organization of the respiratory system exam, the physiological principles upon which the examination is based and the interpretation of the findings in a respiratory system. The examination of the upper airway is not covered.
The student will need a stethoscope.;60 minutes;physicians' assistants

PROBLEM-ORIENTED MEDICAL RECORDS (shp37;1974;unpublished)
Stutz, David R; Romanchek, James
Sheppard Air Force Base, Texas
This lesson teaches the student to record and organize the material in a medical chart according to the patient's problems.
none;20-30 minutes;physicians' assistants

PULMONARY EMBOLISM (shp44;1975;unpublished)
Russell, Lawrence
Sheppard Air Force Base, Texas
This lesson defines the terms associated with pulmonary embolism, describes the difference between pulmonary circulation and systemic circulation, lists the sequence of events which can follow pulmonary embolism, and discusses the treatment and prevention of the disease.
none;2 hours;physicians' assistants

PULMONARY FUNCTION TESTING (shp93;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson discusses specific tests which assess a patient's pulmonary function. The student is given a chance to practice interpreting test results for some hypothetical patients.
none;90 minutes;physicians' assistants

RESTING MEMBRANE POTENTIAL (shp21;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson reviews the structure and functions of a cell membrane necessary for the establishment of the resting membrane potential. The process of active transport is described in detail and its role in cell function defined.
none;60 minutes;physicians' assistants

REVIEW OF LABORATORY MYCOLOGY FOR LABORATORY TECHNOLOGISTS (miccarle1;1976;unpublished)
Koehler, Janice Herbeck
Carle Foundation Hospital, Urbana, Illinois
This is a self-assessment exercise for laboratory technology students which tests knowledge of clinical mycology. Terminology, media and environment, and organisms are covered.
none;open-ended;students of medical technology

SIMULATED PATIENT ENCOUNTER (shp79;1973;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson provides a clinical simulation in which the student takes a medical history, performs a physical exam, requests laboratory tests to be run, makes a diagnosis and consults with the patient.
none;1-2 hours;physicians' assistants

UPPER AIRWAY DISEASE (shp96;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson defines upper airway disease, identifies disease processes that are associated with specific anatomical areas of the upper respiratory tract and describes the etiology of upper airway disease, the diagnostic features of the disease processes and the treatment.
This lesson requires 35mm slides.;2 hours;physicians' assistants

X-RAY OF THE CHEST, PART I (shp54;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas
This lesson will teach the student to identify the proper xray view of the chest to meet the needs of a given situation.
slide set of xrays;20-30 minutes;radiologists

X-RAY OF THE CHEST, PART IV (shp98;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas
This lesson teaches the student to look at and read specific chest xrays.
This lesson requires slides of specific xrays.;60 minutes;radiologists

X-RAY OF THE CHEST, PARTS II AND III (shp60;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas
This lesson teaches the student to become familiar with the xray appearance of the bones of the thoracic cage, the mediastinum and the lungs.
none;45-60 minutes;radiologists

Medicine, Clinical

ATELECTASIS AND RESPIRATORY DISTRESS SYNDROME OF THE NEWBORN (rds;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of atelectasis and respiratory distress syndrome of the newborn. An outline format is used, with review questions presented to assess the student's understanding of the material.
optional touch panel;none;first year medical students

CONGENITAL CARDIAC DEFECTS (cardianom;1977;unpublished)
Choate, B. Paul; McCraw, Gordon W; Sharpe, George
Oklahoma University Health Sciences Center
This lesson is concerned with the clinical and pathological aspects of various congenital cardiac defects. It also covers the development and etiology of such defects. Some of the defects covered are ventriculo-septal defects, transposition of vessels, valvular and combinations defects.
optional touch panel;30 minutes;first year medical students

CONGENITAL DEFECTS OF THE HEART AND GREAT VESSELS (pedcard;1977;unpublished)
Green, Michael; Sliwa, W. Gerard
School of Basic Medical Science, Univ. of Illinois
This lesson presents basic physiology and key clinical signs of major congenital defects of the heart and great vessels.
none;none;first year medical students

DIFFERENTIAL DIAGNOSIS GI HEMORRHAGE (gihem;1975;unpublished)
Trachtenbarg, David E; Poncher, Randy
Abraham Lincoln School of Medicine, Univ. of Illinois
In this simulation lesson, the user acts as a first-year resident and sees a pediatric patient in the emergency room. The supervisor asks questions about many of the resident's decisions to see if knowledge of the basic medical facts is sound. Decisions must be made about managing the patient in terms of history, lab, physical exam and treatment.
none;14 minutes;medical students

INHALATIONAL LUNG DISEASES (inhal;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of inhalational lung diseases. Sections on pneumoconiosis, extrinsic allergic alveolitis and chemical pneumonitis are presented. These diseases are characterized by damage to the lungs caused by inhalation of dusts (organic or inorganic), fumes or noxious substances.

optional touch panel;none;first year medical students

MICROBIAL TOXINS III: CLINICAL CASES (microtox3;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois

Three clinical toxemias are presented for diagnosis by the student. Such aspects as symptoms, pathogenesis, and treatment are emphasized.

slide selector, microfiche;15 minutes;first year medical students

PHYSICIAN SELF-ASSESSMENT III (psa03;1974;unpublished)
Lackmann, John; Bloomfield, Louis; Dubrow, Ira
Abraham Lincoln Medical School, University of Illinois

In this simulated emergency, the user, as doctor, is awakened in the middle of the night by a phone call from a frantic mother. Her baby has an earache and is tugging at his ears. The doctor must decide whether to meet her at the emergency room right away, send her out for a prescription, or have her call back in the morning.

optional touch panel;open-ended;medical students

PHYSICIAN SELF-ASSESSMENT VI (psa06;1976;unpublished)
Lackmann, John; Chen, Thomas; Yamada, Mitsuru; et al.
Abraham Lincoln School of Medicine, Univ. of Illinois

This lesson simulates an emergency room call for a man suffering from welts. Initial contact is by phone, as the doctor (the user) is awakened in the night. The doctor sees the patient, takes history, physical, does lab tests, admits man to the hospital and prescribes proper treatment. Procedures are summarized at the end and the student is graded.

microfiche, optional touch panel;open-ended;medical students

PNEUMOTHORAX AND INTERSTITIAL EMPHYSEMA (pneumo;1977;unpublished)
McCraw, Gordon W; Lawrance, David P; Coalson, J. J.
Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of interstitial emphysema and pneumothorax. The classification schema presented includes that favored by pathologists and that used by clinicians. The material is presented in a highly indexed outline format, facilitating access to specific areas.

optional touch panel;none;first year medical students

TUMORS OF THE RESPIRATORY SYSTEM (1tumor;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of tumors of the respiratory system. Diagnostic criteria and possible hormonal syndromes are also considered. A highly indexed outline format is utilized with questions presented to help assess the student's understanding of the material.
optional touch panel;none;first year medical students

Medicine, Internal

see Internal medicine

Medicine--Anatomy

ANATOMY OF THE BRAINSTEM (med1;1978;unpublished)
Lehr, Robert P; Wong, Did (Ben); Farney, Thomas L
Southern Illinois University School of Medicine
This lesson consists of 11 exercises, each of which is a cross-section of the brainstem. The student is asked to identify structures in the cross-sections as they are randomly presented.
none;none;first year medical students

ELECTROCARDIOGRAPHY (ekg0;1974;1978)
Smetzer, David L; Koehn, Charles E
College of Veterinary Medicine, University of Illinois
The lesson describes by animated graphics the sequence of spread of electrical activity through the normal heart and relates the spread of electrical activity to the genesis of the electrocardiogram. The lesson is non-interactive ss far as the student is concerned.
none;one hour;students of veterinary medicine

INTRO. TO THE HUMAN NERVOUS SYSTEM: SPINAL CORD (nervsyst;1976;unpublished)
Wadsworth, Gladys E; Kroll, Martin
School of Medicine, University of Maryland, Baltimore
This lesson is composed of two subunits: part one identifies the three subsystems into which the nervous system is classified, and part two describes the fundamental external and internal structures of the spinal cord as well as the meniges and their relationship to each other. The sources of the blood supply to the spinal cord are discussed briefly.
none;35 minutes;first year medical students

Medicine--Anatomy--Examinations, questions, etc.

ANATOMY QUIZ: ABDOMINAL WALL AND VISCERA (anaquiz3;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson features six separate areas - each area presenting questions in a different format (e.g., multiple choice and sequencing). The content includes the inguinal canal, bile duct system, topography of the abdominal viscera, vasculature of abdominal wall and viscera, and muscles and nerves of the abdominal wall.

none;15 minutes;first year medical students

ANATOMY QUIZ: LOWER EXTREMITY (anaquiz4;1976;unpublished)
Kahn, Madelyn I; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson features five separate areas - each area presenting questions in a different format (e.g., fill in the blank and sequencing). The content includes the veins, arteries, nerves, and muscles of the lower extremity. Student's score on the quiz is presented and evaluated.

none;20 minutes;first year medical students

ANATOMY QUIZ: PELVIS AND PERINEUM (anaquiz2;1976;unpublished)
Kahn, Madelyn I; Gaburo, K; McCormick, R
School of Basic Medical Sciences, Univ. of Illinois

This lesson features four separate areas - each area presenting questions in a different format (e.g. fill in blank and sequencing). The content includes veins, arteries, nerves, compartments and muscles of the perineum; features of the male and female reproductive systems, and ligaments of the female reproductive system. Score is presented and evaluated.

none;15 minutes;first year medical students

ANATOMY QUIZ: THE HEAD (anaquiz1;1976;unpublished)
Kahn, Madelyn I; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson features six separate areas - each area presenting questions in a different format (e.g., multiple choice or sequencing). The content includes arteries and veins, nerves and plexuses, muscles and ligaments, bony markings, sinuses and eyeball muscles. Student's score on the quiz is presented and evaluated.

none;15 minutes;first year medical students

ANATOMY QUIZ: THE NECK (anaquiz6;1976;unpublished)
Gaburo, K; McCormick, R; Kahn, Madelyn I
School of Basic Medical Sciences, Univ. of Illinois

This lesson features five separate areas - each area presenting questions in a different format (e.g., multiple choice or matching). The content includes neck spaces, triangles, neural and blood supply, and ligaments and muscles. Student's score on the quiz is presented and evaluated.

none;15 minutes;first year medical students

ANATOMY QUIZ: THORACIC WALL, HEART AND MEDIASTINUM (anaquiz5;1974;unpublished)
McCormick, R; Kahn, Madelyn I; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois

This lesson features six separate areas - each area presenting questions in a different format (e.g., sequencing and matching). The content includes heart valves and blood supply through the heart, layers of the thoracic wall, muscles of thoracic and abdominal walls, innervations and blood supply of the thoracic wall, organ topography of mediastinum.

none;15 minutes;first year medical students

BASIC BRAIN ANATOMY (curtiss4;1977;unpublished)
Dubrick, Anton J; Curtis, Brian A
Peoria School of Medicine of the Univ. of Illinois

Part I of this lesson discusses the medulla, pons and midbrain, cerebellum and diencephalon. Part II presents the cortical lobes, cortical landmarks and primary motor and sensory cortices. The student is given an opportunity to learn the location of each part and its associated functions.

touch panel;20-30 minutes;first year medical students

BRACHIUM: CLINICAL APPLICATIONS AND DRILL (antebr1;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

In this quiz lesson, the student is asked to identify gross anatomical structures of the forearm. PLATO graphics are used as the source for questions. Bone fractures and a knife puncture are used in this practical anatomy approach.

none;15 minutes;first year medical students

BRACHIUM: STRUCTURE, IDENTIFICATION, AND DRILL (brach1;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

In this quiz lesson, the student is asked to identify gross anatomical structures of the arm. PLATO graphics are used as the source for questions. The major content area includes identification of certain parameters of muscle function (origin, insertion, innervation and action) associated with the brachium.

none;15 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART I - THE THORAX (skelsys2;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thorax. Surfaces, borders and markings of the sternum, costal cartilages, and typical and atypical ribs are illustrated and described. Boundaries of the thoracic inlet and outlet are defined. Directions for palpating subcutaneous parts of these bones are included. There is a post-test.

none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART III - THIGH AND LEG (skelsys3;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thigh and leg. Surfaces, borders and markings of the femur, patella, tibia and fiblua are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART V - SHOULDER GIRDLE (skelsys5;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the shoulder girdle. Surfaces, borders and markings of the clavical and scapula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART VI - THE ARM (skelsys6;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the arm and forearm. The surfaces, borders and markings of the humerus, radius and ulna are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PT.II - PELVIC GIRDLE (skelsys;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This lesson on osteology introduces the student to the bones of the pelvic girdle. Surfaces, borders and markings of the hipbone, sacrum and coccyx are illustrated and identified. The bony landmarks of the pelvic inlet and outlet are identified, as well as characteristics which aid in determining the sex of the pelvis. A post-test is included.

none;20 minutes;first year medical students

THE HUMAN SKELETAL SYSTEM: PT.IV - BONES OF THE FOOT (skelsys4;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This lesson presents the osteology of the bones of the foot. Surfaces and markings of the tarsals, metatarsals and phalanges are illustrated and described. Directions for palpating the structures of these bones which are subcutaneous and readily felt in the living body are included. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

INTRODUCTION TO THE HUMAN NERVOUS SYSTEM: NERVE PLEXUSES (nervplex;1976;unpublished)
Wadsworth, Gladys E; Bennett, Charles
School of Medicine, Univ. of Maryland, Baltimore

This lesson describes the plexuses derived from ventral rami of spinal nerves. It develops schematically the major structural components of the brachial plexus and relates the effect severance of these components has upon the muscles they innervate.

none;15 minutes;first year medical student

INTRO. TO HUMAN NERVOUS SYSTEM: SPINAL NERVES (nervsyst2;1976;unpublished)
Wadsworth, Gladys E; Kroll, Martin
School of Medicine, University of Maryland, Baltimore

This lesson enumerates the segmental nerves and illustrates the components of a typical spinal nerve. Characteristics of the ventral rami of thoracic nerves are presented graphically. Shown schematically is the structure of motor and sensory neurons and the visceral motor pathway of the sympathetic division of the autonomic nervous system.

none;15 minutes;first year medical students

INTRO. TO THE HUMAN NERVOUS SYSTEM: DERMATOMES (derma;1976;unpublished)
Wadsworth, Gladys E; McDiarmid, Melissa A
School of Medicine, Univ. of Maryland, Baltimore

This lesson defines the term "dermatome" and presents schematically the effect of overlapping of contiguous segments. It illustrates the dermatomal pattern of the upper limb and compares the sensory innervation of a spinal nerve with that of a peripheral nerve.

none;15 minutes;first year medical students

A QUIZ ON THE SCAPULA (scapula;1977;unpublished)
Miller, David B; McCraw, Gordon W
School of Basic Medical Sciences, Univ. of Illinois

This quiz lesson tests the student's knowledge of all gross anatomical structures impinging upon the scapula, including origins, insertions, innervations, and actions of the muscles, bony landmarks and their functions, and the major vascular channels.

none;15 minutes;first year medical students

SPINAL CORD ANATOMY, A CLINICAL APPROACH (curtiss5;1977;unpublished)
Dubrick, Anton J; Curtis, Brian A
Peoria School of Medicine of the Univ. of Illinois

This lesson covers basic cord anatomy, spinal nerve roots, discs, reflexes and major spinal tracts. A quiz and clinically oriented practice drills are included.

touch panel;15 minutes;first year medical students

UPPER MEMBER CLINICAL APPLICATION (umclin1;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
Three problems with a clinical flavor illustrate for the student the efficacy of anatomical knowledge in medical practice: 1) consequences of severing the deep radial nerve, 2) consequences of injury to radial nerve by midshaft fracture of the humerus, and 3) consequences of brachial plexus injury by shoulder hyperdepression.
none;10 minutes;first year medical students

Medicine--Death--Psychological aspects

DEATH AND DYING: PSYCH. MANAGEMENT OF THE TERMINAL PATIENT (death;1976;unpublished)
Ruggieri, Pamela J; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development
This lesson provides a short introduction to the work of Kubler-Ross, followed by a didactic simulation of counseling a terminal patient, Mr. Kraft. Mr. Kraft makes statements and the student must pick from the replies provided. Analysis questions are asked about each of the choices. The case is summarized at the end.
none;none;medical students, any health professional

Medicine--Dictionaries

ANATOMICAL TERMINOLOGY II: DICT. AND DRILLS FOR ROOTS, ETC. (anaterm2;1975;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
Over 300 of the commonly used anatomical/medical morphemes (roots, prefixes, and suffixes) are presented in this dictionary and drill type lesson. With each morpheme is its meaning, its Greek and Latin derivation and a sample word illustrating its use. Drills on ten morphemes at a time are available as an aid to learning reinforcement.
touch panel;open-ended;medical students

Medicine--Examinations, questions, etc.

MEDICAL REFERENCE DRILLS (meddrill;1977;unpublished)
Rodewald, Lance E; Samuel, David; Farney, Thomas L
Southern Illinois University School of Medicine
This is a lesson which randomly presents the student with questions on normal laboratory values and facts. Before taking each drill, the user is allowed to study the appropriate values.
none;10 minutes per drill;first year medical students

SELF-ASSESSMENT DRILLS (sa2;1974;unpublished)
Abraham Lincoln School Faculty
Abraham Lincoln Medical School, University of Illinois
These lessons (sa2-sa7) are intended to help the student to review and improve his or her knowledge in the selected areas. The questions in these drills were authored by faculty at the Abraham Lincoln School of Medicine.
none;varies for each drill;first year medical students

TEACHING-LEARNING EXAMS (;1976-1977;unpublished)
Basic Sciences Faculty, U of I
University of Illinois Medical Center, Chicago
These lessons were authored by the Basic Sciences Faculty at the University of Illinois Medical Center in Chicago, to be used by students for self-assessment.
optional touch panel;variable;first year medical students

Medicine--Histology

CUTTHROAT HISTOLOGY: COMPETITITIVE INTERTERM. DRILL (cuthis;1976;unpublished)
McCormick, R; Gaburo, K
Basic School of Medical Sciences, Univ. of Illinois
This lesson features the identification of tissues and organs from over 200 photomicrographs on microfiche. A series of questions, related to that photomicrograph, are presented for the student to answer as fast and as accurately as possible. The student may challenge another student or match wits with PLATO. The photomicrographs and questions may be reviewed.
microfiche;open-ended;first year medical students

HISTOLOGY - EPITHELIUM (etisl;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
This lesson teaches beginning students the fundamentals of epithelial characteristics, identification and classification. Junctional complexes and and cell surface specializations are included. Color photomicrographs of tissues and PLATO graphics, combined with extensive interactive feedback are featured. There is a pre-test and a post-test.
microfiche;none;first year medical students

INTRODUCTION TO PLATO HISTOLOGY (beghis;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
This lesson is composed of two subunits. The first introduces the student to the subject of histology - defining "histology" and "tissue." An attempt is made to motivate the student toward studying the tissues. The second section describes the methods for using the "microfiche system" in the PLATO histology lessons.
microfiche;20 minutes;first year medical students

Medicine--Immunology

MOUNTING IMMUNE RESPONSES (immuresp;1978;unpublished)
Kessel, Ross; Rivera, David
University of Maryland and University of Illinois
This lesson covers the basics of the immune response, including the mediators (ab and lymphocytes), antibody synthesis, cell mediated immunity and immunotolerance.
none;none;first year medical students

Medicine--Medical microbiology

BASIC VIROLOGY IVD: VIRAL GROUPS - DNA VIRUS QUIZ (kvirus5d;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The student is quizzed over any information presented in PLATO lessons: Basic Virology IVa, IVb, IVc, covering DNA viruses. A quiz of ten questions may be taken over an individual group or a quiz of 10-72 questions may be taken over all viral groups discussed. Self-evaluation and diagnosis is provided at the quiz completion.
none;35 minutes;first year medical students

MICROQUIZ II: GASTROINTESTINAL INFECTIONS (gastroquiz;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson is in a quiz-game format and reviews topics of habitat, transmission, morphology, growth, diagnostic techniques, immunology, pathogenicity, and chemotherapy of gastrointestinal infectious agents such as protozoa, helminths, salmonella, shigella, coliform, bacilli, and enteric bacilli.
none;20 minutes;first year medical students

MICROQUIZ I: RESPIRATORY INFECTIONS (uriquiz;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson is in a quiz-game format and reviews topics of habitat, transmission, morphology, growth, diagnostic techniques, immunology, pathogenicity, and chemotherapy of respiratoy disease agents such as RNA viruses, fungi, mycobacteria, diphtheria, haemophilus, mycoplasma, cocci, and chlamydia.
none;20 minutes;first year medical students

Medicine--Medical microbiology--Examinations, questions, etc.

BASIC VIROLOGY IVD: VIRAL GROUPS - DNA VIRUS QUIZ (kvirus5d;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The student is quizzed over any information presented in PLATO lessons: Basic Virology IVa, IVb, IVc, covering DNA viruses. A quiz of ten questions may be taken over an individual group or a quiz of 10-72 questions may be taken over all viral groups discussed. Self-evaluation and diagnosis is provided at the quiz completion.
none;35 minutes;first year medical students

MICROQUIZ II: GASTROINTESTINAL INFECTIONS (gastroquiz;1975;unpublished)

Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson is in a quiz-game format and reviews topics of habitat, transmission, morphology, growth, diagnostic techniques, immunology, pathogenicity, and chemotherapy of gastrointestinal infectious agents such as protozoa, helminths, salmonella, shigella, coliform, bacilli, and enteric bacilli.

none;20 minutes;first year medical students

MICROQUIZ I: RESPIRATORY INFECTIONS (uriquiz;1975;unpublished)

Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson is in a quiz-game format and reviews topics of habitat, transmission, morphology, growth, diagnostic techniques, immunology, pathogenicity, and chemotherapy of respiratoy disease agents such as RNA viruses, fungi, mycobacteria, diphtheria, haemophilus, mycoplasma, cocci, and chlamydia.

none;20 minutes;first year medical students

Medicine--Pathology

CELL INJURY: INTRO. TO CELL INJURY & CELL DEATH (cellinjury;1976;unpublished)

Mergner, Wolfgang; Bennett, Charles
School of Medicine, Univ. of Maryland, Baltimore

This lesson defines cell injury, distinguishes acute chronic cell injury, defines reversible and irreversible cell injury, and differentiates between the two by defining the "point of no return." The lesson also describes the three factors of ischemic cell injury: anoxia, lack of perfusion, and lack of substrate.

none;15 minutes;first year medical students

CONGENITAL CARDIAC DEFECTS (cardianom;1977;unpublished)

Choate, B. Paul; McCraw, Gordon W; Sharpe, George
Oklahoma University Health Sciences Center

This lesson is concerned with the clinical and pathological aspects of various congenital cardiac defects. It also covers the development and etiology of such defects. Some of the defects covered are ventriculo-septal defects, transposition of vessels, valvular and combinations defects.

optional touch panel;30 minutes;first year medical students

Medicine--Pathology--Examinations, questions, etc.

ATELECTASIS AND RESPIRATORY DISTRESS SYNDROME OF THE NEWBORN (rds;1977;unpublished)

Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of atelectasis and respiratory distress syndrome of the newborn. An outline format is used, with review questions presented to assess the student's understanding of the material.

optional touch panel;none;first year medical students

CELL INJURY II: ORGANELLE CHANGES: ACUTE CELL INJURY (cell2;1977;unpublished)
Mergner, Wolfgang; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore
This lesson stresses the biochemical and structural changes in acute cell injury, as well as altered organelles. Mitochondrial changes are discussed in detail and compared to changes in the cytosol, nucleus, lysosol, cell membrane and endoplasmic reticulum. Reaction to cell injury is subdivided into three phases: before, at or after the point-of-no-return.
none;45 minutes;first year medical students

CIRCULATORY DISORDERS OF THE RESPIRATORY SYSTEM (congest;1976;unpublished)
Perrymore, W. Dale; McCraw, Gordon W; Leveridge, C. Tony
Oklahoma University Health Sciences Center
This lesson covers pathological and clinical aspects of various circulatory diseases of the respiratory system. Included are CPC, cor pulmonale, pulmonary embolism, edema infarcation and hypertension. The material is presented in a highly indexed outline format, facilitating access to each specific area.
optional touch panel;30 minutes;first year medical students

GRANULOMATOUS INFECTIONS OF THE RESPIRATORY SYST. (granuloma;1977;unpublished)
Leveridge, C. Tony; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathologic entities of pulmonary tuberculosis and sarcoidosis, as well as dealing with mycotic infections and coin lesions in the context of granulomatous conditions. The material is highly indexed, facilitating access to specific areas.
optional touch panel;none;first year medical students

INHALATIONAL LUNG DISEASES (inhal;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of inhalational lung diseases. Sections on pneumoconiosis, extrinsic allergic alveolitis and chemical pneumonitis are presented. These diseases are characterized by damage to the lungs caused by inhalation of dusts (organic or inorganic), fumes or noxious substances.
optional touch panel;none;first year medical students

PNEUMOTHORAX AND INTERSTITIAL EMPHYSEMA (pneumo;1977;unpublished)
McCraw, Gordon W; Lawrance, David P; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of interstitial emphysema and pneumothorax. The classification schema presented includes that favored by pathologists and that used by clinicians. The material is presented in a highly indexed outline format, facilitating access to specific areas.
optional touch panel;none;first year medical students

TUMORS OF THE RESPIRATORY SYSTEM (1tumor;1977;unpublished)

Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of tumors of the respiratory system. Diagnostic criteria and possible hormonal syndromes are also considered. A highly indexed outline format is utilized with questions presented to help assess the student's understanding of the material.

optional touch panel;none;first year medical students

Medicine--Statistical methods

MEDICAL DECISION MAKING (decision;1976;unpublished)

Appel, Andrew W; Mabry, Frank J
School of Basic Medical Sciences, Univ. of Illinois

This lesson is a short introduction to some of the principles of therapeutic decision making. Techniques introduced are the calculation of probabilities from morbidity/mortality data and the use of decision trees to decide from this data upon a course of treatment.

optional touch panel;none;medical students

Medicine--Terminology

ALLERGY MECHANISM AND BASIC ALLERGY TERMINOLOGY (shp49;1975;unpublished)

Roseman, Gerald J
Sheppard Air Force Base, Texas

This lesson will enable the student to become familiar with the terminology used to describe the allergy mechanism, to differentiate between stages of this mechanism and to name the tissues affected in allergy and their physiological response.

none;90 minutes;physicians' assistants

ANATOMICAL REFERENCE TERMINOLOGY (shp56;1975;unpublished)

Seager, Brent C
Sheppard Air Force Base, Texas

This lesson will teach the student to name the "standard position" of the body for proper anatomical reference, the correct anatomical reference terms based upon descriptive phrases displayed with appropriate drawings, and the three anatomical "planes of reference". A "matching drill" of twelve anatomical reference definitions is included.

none;20-30 minutes;physicians' assistants

ANATOMICAL TERMINOLOGY II: DICT. AND DRILLS FOR ROOTS, ETC. (anaterm2;1975;unpublished)

McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

Over 300 of the commonly used anatomical/medical morphemes (roots, prefixes, and suffixes) are presented in this dictionary and drill type lesson. With each morpheme is its meaning, its Greek and Latin derivation and a sample word illustrating its use. Drills on ten morphemes at a time are available as an aid to learning reinforcement.

touch panel;open-ended;medical students

ANATOMICAL TERMINOLOGY I: HOW TO ANALYZE ANATOMICAL TERMS
(anateml; 1975;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois
This lesson is designed to help the user learn how to analyze anatomical/medical terms - breaking each term apart into individual morphemes (prefixes, roots and suffixes). The user is given the opportunity to practice what he/she has learned.
none;10 minutes;first year medical students

ANATOMY: PLANES, DIRECTIONS, AND MOVEMENTS (intvocl;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews basic terminology of planes, directions and motions in human anatomy.
none;15 minutes;first year medical students

CYTOTOXIC HYPERSENSITIVITY (mdimmum;1975;unpublished)
Kessel, Ross; Wagner, Kenneth; Cohen, Barry; et al.
University of Maryland and University of Illinois
This lesson deals with cytotoxic (Type II) hypersensitivity. It covers the mediators and the mechanisms of cytotoxic hypersensitivity as well as the laboratory investigation, management and pathology of some cytotoxic disease states.
none;30 minutes;first year medical students

Medicine--Terminology--Examinations, questions, etc.

ANATOMICAL TERMINOLOGY III: A COMPETITIVE DRILL ON ROOT WORDS
(anaterm3; 1975;unpublished)
McCormick, R; Gaburo, K; Siegel, Martin A; et al.
School of Basic Medical Sciences, Univ. of Illinois
This lesson features a learning reinforcement drill (feedback paradigm) on the more commonly used anatomical/medical roots. At the user's option his/her score is displayed with the twenty top users at the end of the lesson.
none;10 minutes;medical students

ANATOMICAL TERMINOLOGY IV: DRILL ON PREFIXES AND SUFFIXES
(anaterm4; 1976;unpublished)
McCormick, R; Gaburo, K; Siegel, Martin A; et al.
School of Basic Medical Sciences, Univ. of Illinois
This lesson features a learning reinforcement drill (feedback paradigm) on the more commonly used anatomical/medical prefixes and suffixes. At the user's option, his/her score is displayed with the top twenty users at the end of the lesson.
none;10 minutes;first year medical students

ANATOMICAL TERMINOLOGY VI: ANATOMY VOCABULARY DRILL-QUIZ
(anaterm6;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

This lesson features a number of rather basic terms in anatomy. As each term is presented, the student has several options: receive a definition or example of how it is used, receive a hint as to what it means, receive a question about the word, or skip to the next new word. A score is recorded on how many words the student correctly defined.

none;10 minutes;first year medical students

ANATOMICAL TERMINOLOGY V: QUIZ ON COMMON ROOT MEANINGS ETC.
(anaterm5;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson features four unique quizzes (race-the-clock matching, word synthesis, synonyms, and fill-in-the-blank) designed to test the user's knowledge of meanings of individual anatomical/medical roots, prefixes, and suffixes. The user's score is compared with the scores of other users and related lessons are suggested for further study.

none;10 minutes;medical students

DIAGNOSE 2: A GAME OF DEDUCTIVE SKILL (pdiag;1976;unpublished)
Solomon, Lawrence; Yamada, Mitsuru; Bonetti, William; et al.
Abraham Lincoln Medical School, Univ. of Illinois

In this game-type lesson the student is first given a triad of complaints, then a triad of history items, then physical items and then laboratory studies. At each step, using deductive logic, the student must select from a list the disease that would fit the given symptoms.

none;20 minutes;medical students

DIAGNOSE: A GAME OF DEDUCTIVE SKILL (diagnose;1976;unpublished)
Solomon, Lawrence; Yamada, Mitsuru; Bonetti, William; et al.
Abraham Lincoln Medical School, Univ. of Illinois

This lesson provides a deductive medical detective game that presents the student with a triad of complaints and a list of 60 diseases. Diseases not fitting the complaint must be eliminated. A triad of history items, a triad of physical items and a definitive triad of laboratory findings offer more data.

none;20 minutes;medical students

EPONYMS: A GAME OF SKILL FOR MEDICAL STUDENTS (eponym;1977;unpublished)
Hain, Timothy C
Abraham Lincoln Medical School, Univ. of Illinois

This lesson is designed to help the student memorize the meanings of names of diseases or syndromes. Once in the drill the user matches the top definition or name with the correct item of the 5 items following. There are 350 definitions divided into groups of 20 or less.

none;30 minutes;medical students

GENERIC: A TEST OF SKILL IN NAMING DRUGS (generic;1976;unpublished)
Hain, Timothy C; Hunter, R. Scott
Abraham Lincoln Medical School, Univ. of Illinois

This lesson is a competitive drill. The student can choose from a list of 21 types of drugs and is presented with either a generic name and a list of brand names, or a brand name and a list of generic names. The correct answer must be selected from 5 choices. Each drill is timed and scored with about 25 trials.

none;open-ended;medical students

THE HUMAN SKELETAL SYSTEM: PT.IV - BONES OF THE FOOT (skelsys4;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This lesson presents the osteology of the bones of the foot. Surfaces and markings of the tarsals, metatarsals and phalanges are illustrated and described. Directions for palpating the structures of these bones which are subcutaneous and readily felt in the living body are included. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

REVIEW OF LABORATORY MYCOLOGY FOR LABORATORY TECHNOLOGISTS (miccarle1;1976;unpublished)
Koehler, Janice Herbeck
Carle Foundation Hospital, Urbana, Illinois

This is a self-assessment exercise for laboratory technology students which tests knowledge of clinical mycology. Terminology, media and environment, and organisms are covered.

none;open-ended;students of medical technology

SELF-ASSESS. QUIZ ON MED. & ANAT. ROOTS, PREFIXES, SUFFIXES (anaterm0;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This is the first in a series of six lessons dealing with anatomical-medical terminology. The lesson presents ten complex terms to the student for analysis-deriving the meaning. The results of student performance are diagnosed, leading the student to specific lessons in the anaterm series that will eliminate his/her weakness.

none;10 minutes;first year medical students

UPPER MEMBER ANATOMY QUIZ (umq1;1974;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

This lesson offers the student a device to test or reinforce recall of terminology of the upper member. The contents include bony markings, vasculatures, muscles, ligaments, and innervations associated with the upper member.

microfiche;15 minutes;first year medical students

Megaloblastic anemia

DRUGS: HEMATINIC AGENTS (kumc47;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois

This lesson discusses the different anemias. Therapy prescribed is based on the etiology of the type of anemia.

none;10 minutes;first year medical students

Melting points

MELTING POINTS AND MIXED MELTING POINTS (meltpt;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson discusses melting point determinations as a laboratory technique in organic chemistry. The effect of purity on melting points, phase diagrams and the use of mixed melting points for identification of compounds is shown.

none;17 minutes;college/university students

Metabolism

ENERGY (nutr6;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I

The sixth lesson in the Nutrition Series discusses the measurement and requirements of energy in relation to the body.

none;25-30 minutes;nutrition students

INTERMEDIARY METABOLISM: TCA CYCLE (mtca2;1975;unpublished)
Agee, C. Coe; Baxter, John E
School of Basic Medical Sciences, Univ. of Illinois

This lesson describes and summarizes many important characteristics of the Tricarboxylic Acid (Krebs) Cycle. The cycle is divided into three sections, each of which consists of a textual explanation, a quiz over the material and a drill covering the names of metabolites and enzymes.

none;40 minutes;first year medical students

Metazoa

PARASITIC METAZOAN TERMINOLOGY (metaterm;1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois

With respect to four groups of medically important parasitic metazoa, i.e. trematodes, cestodes, nematodes, and arthropods, the lesson reviews terms commonly associated with morphology and the life cycles in a linear format of text with inserted questions.

none;5 minutes;first year medical students

Meteorology in aeronautics

SEQUENCE REPORTS (weather;1976;1977)
Lombardo, David A
University of Illinois

The lesson teaches how to determine existing weather at the starting point, enroute and at the terminal point of a proposed plane trip by reading and correctly interpreting weather teletype information broadcast by the FAA.

none;none;general

Metric system

BASIC METRIC CONVERSIONS (shp12;1974;unpublished)
Mosley, Richard L
Sheppard Air Force Base, Texas

This lesson will teach the student to convert fractions to decimal expression and metric measurements of weight, length and volume to their subdivisions of metric form. The student will also learn to calculate the amount of medication to administer to a patient, given the doctor's order and the amount of medication in each tablet.

none;20-30 minutes;physicians' assistants

LOG SCALES, METRIC SYSTEM, CHI-SQUARE ANALYSIS (met;1978;unpublished)
Hyatt, Gary; Baillie, Robert
Dept. of Biological Sciences, U of I, Chicago Circle

This lesson uses question-answer and drill and practice techniques to demonstrate use of the metric system, logarithmic scales and chi-square analysis.

none;variable, depending on parts used;university/college students

MATHEMATICS OF DRUGS AND SOLUTIONS (metapo;1975;1979)
Bitzer, Maryann; Lyman, Elisabeth R; McManus, Bonnie
Mercy Hospital School of Nursing, Urbana, Ill.

After completing the lessons in this unit, the student should be able to recognize the most commonly used units in the metric and apothecary systems of measurement, compute equivalent dosage of medication utilizing the metric and apothecary system of measurement and solve problems related to drugs and solution dosages.

none;none;nursing students

THE METRIC SYSTEM (liter;1975;1977)
Chabay, Ruth
Chemistry Department, University of Illinois

The lesson introduces units of length, mass, volume, temperature. Emphasis is placed on conversion both within the metric system (eg liters to ml) and from English to metric unit. Dimensional analysis is stressed. An attempt is made to give a feeling for metric units.

none;58 minutes;college/university freshmen

Microbiological research

GENETIC CODE (code1;1976;1976)

Kaplan, Samuel; Francis, Rosanne; Schwaiger, Jim

Dept. of Microbiology, Sch. of Life Sciences, U of I

This is a series of lessons for studying the fundamental nature of the genetic code as revealed by a study of the experiments of Brenner, Crick, Khorana and colleagues. The latter part of the sequence of lessons allows the students to run simulations in the techniques used by the above experimentors so as to crack the genetic code.

none;5 hours;college or university students of microbiology.

Microbiology

see also Medical microbiology

CELL GROWTH (coli;1976;1978)

Francis, Rosanne; Kaplan, Samuel

Dept. of Microbiology, Sch. of Life Sciences, U of I

This is the first of a series of lessons on cell growth written for biologists. The lessons include instruction in the mathematics involved in graphing exponential cell growth data as well as presenting the various phases of cell growth. The lessons are in the series: coli, coli2 - coli7.

none;3 hours for series;college/university students

Microeconomics

Competition

MICRO ECONOMICS II: IMPERFECT COMPETITION (consume4;1976;1977)

Paden, Donald W; Barr, Michael

Department of Economics, University of Illinois

The lesson presents the subject of less than perfect competition (imperfect competition) among firms conducting business in markets where there are numerous producers selling a differentiated product. The lesson stresses the simularities between monopoly, oligopoly, and monopolistic competition.

none;40 minutes;college/university

PERFECT COMPETITION (microiii;1976;1977)

Paden, Donald W; Barr, Michael

Department of Economics, University of Illinois

The lesson reviews the competition concepts learned in the lesson on "Imperfect Competition" showing how producers in our society are faced as an industry with a market demand curve which is the sum of all demand curves of individual consumers. The lesson then presents the concept of perfect competition in which firms sell standardized products.

none;40 minutes;college/university

Supply and demand

MICRO ECONOMICS I: SUPPLY AND DEMAND (consume3;1976;1977)
Paden, Donald W; Barr, Michael; Wilson, James H
Department of Economics, University of Illinois

The lesson reviews the concepts of demand and supply and (demand) elasticity by a series of questions on the concepts which are graphically illustrated in a simple manner. The student's answers are scored giving him a means of assessing the extent of his knowledge and understanding of the concepts of Demand, Supply and Elasticity.

none;35 minutes;college/university

Microeconomics--Problems, exercises, etc.

REVIEW QUESTIONS FOR INTRO. TO ECON. ANALYSIS, 2ND HR. EXAM (eco101;1976;1978)
Paden, Donald W; Barr, Michael
Department of Economics, University of Illinois

This program contains a series of ten multiple choice questions to be used as a review for the second hour examination in a course, "Introduction to Economic Analysis". The questions are on the microeconomic material in the course. The questions are reproduced from "An Introduction to Economic Analysis" by Donald W. Paden, West Publishing Co.,1975.

none;10 minutes;college/university

Microscope and microscopy

INTRODUCTION TO OPTICAL MICROSCOPY (mscope;1977;unpublished)
Snellen, James E
School of Basic Medical Sciences, Univ. of Illinois

This lesson acquaints the student with some of the fundamental principles of optical microscopy. It includes the nature of vision, different types of lenses, and the optical microscope.

none;15 minutes;first year medical students

Micro-organisms, Pathogenic

MICROBIAL TOXINS I: ALGAL AND FUNGAL SPECIES (microtox;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois

The lesson is one of a series on pathogenicity through toxin production. Basic and clinical information concerning algal and fungal toxins is presented. The purpose of the lesson is to make the student aware of such toxins, which are often ignored in favor of bacterial toxins.

slide selector, microfiche;10 minutes;first year medical students

Migration, Internal

MIGRATION AND URBANIZATION MODEL (migl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using migration and urbanization variables can be graphed. Both internal and international migration can be examined. Variables can be changed for each projection.
none;open-ended;persons studying populations

Migration of nations

MIGRATION AND URBANIZATION MODEL (migl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using migration and urbanization variables can be graphed. Both internal and international migration can be examined. Variables can be changed for each projection.
none;open-ended;persons studying populations

Military arts and sciences

TRIAD AND STRATEGIC DETERRENCE (triad;1979;unpublished)
Everett, Kenneth N; Prebeck, Steven R
Air Force Reserve Officers Training Corps / U of I
This lesson provides a general overview of the concept of strategic deterrence and the role that the triad of military nuclear forces serves in that concept.
microfiche, optional touch panel;35 minutes;cadets and general public

Military science

see Military arts and science

Milk hygiene

PASTEURIZATION OF MILK AND DAIRY PRODUCTS (vmpastp;1975;1978)
Grimes, George M; Holt, Elsbeth
College of VeterinaryMedicine, Univ. of Illinois
The lesson attempts to acquaint the student with the three main types of pasteurization processes in which pathogenic organisms may be destroyed without materially altering the flavor or consistency of milk.
touch panel (opt.) slide selector, microfiche;1 hour;vet med students

Milk--Analysis and examination

VETERINARY PUBLIC HEALTH ASPECTS OF MILK AND DAIRY PRODUCTS (milkp;1974;1978)
Grimes, George M; Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois
The lesson provides a general knowledge of the veterinary public health aspects of defense against disease from milk and dairy products. The various sources of contamination and adulteration are indicated, the defenses appropriate to prevent disease, and the inspection responsibility and authority.
none;2 hours;professional students of veterinary medicine

Milk--Pasteurization

PASTEURIZATION OF MILK AND DAIRY PRODUCTS (vmpastp;1975;1978)
Grimes, George M; Holt, Elsbeth
College of VeterinaryMedicine, Univ. of Illinois
The lesson attempts to acquaint the student with the three main types of pasteurization processes in which pathogenic organisms may be destroyed without materially altering the flavor or consistency of milk.
touch panel (opt.) slide selector, microfiche;1 hour;vet med students

Minerals in the body

MACROMINERALS (macmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson presents information about macrominerals, or those minerals required in the human diet in amounts exceeding 100 mg. per day. The macrominerals are calcium, phosphorus, magnesium, potassium, sodium, sulphur and chlorine.
none;25-30 minutes;nutrition students

MICROMINERALS (minmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson discusses microminerals, or those elements that are required in the human diet in amounts less than 100 mg. per day. Iron, iodine and fluorine are three of the most important.
none;25-30 minutes;nutrition students

Mitochondria

CELL INJURY II: ORGANELLE CHANGES: ACUTE CELL INJURY (cell2;1977;unpublished)
Mergner, Wolfgang; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore
This lesson stresses the biochemical and structural changes in acute cell injury, as well as altered organelles. Mitochondrial changes are discussed in detail and compared to changes in the cytosol, nucleus, lysosol, cell membrane and endoplasmic reticulum. Reaction to cell injury is subdivided into three phases: before, at or after the point-of-no-return.
none;45 minutes;first year medical students

EXPERIMENTS IN RESPIRATION (respir1;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson explains the dependence of mitochondrial activity and enzyme activity on temperature. The student also designs an experiment to determine optimum temperature for activity.
none;30 minutes;college/university students

Models (Chemistry)
see Chemical models

Molecular rotation

INTRODUCTION TO OPTICAL ACTIVITY (chiral;1974;unpublished)
Smith, Stanley
Chemistry Department, University of Illinois

As an introduction to the subject of optical activity of organic molecules, 3-D representations of some organic molecules and their mirror images are graphically presented. The recognition of chiral molecules, the measurement of the rotation of 2-butanol and the subject of optical purity is also discussed and illustrated.

none;59 minutes;college/university students

Molecular weights

CALCULATION OF MOLECULAR WEIGHTS (moles;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois

The lesson presents practice problems on molecular weights and moles.

none;17 minutes;students of introductory chemistry

MOLECULAR FORMULAS AND PERCENT COMPOSITION (pcomp;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois

The purpose of the lesson is to teach the student the concept of moles, atomic weight, molecular weight, empirical formula and molecular formula. After each concept is explained and illustrated, problems are given for the student to solve.

none;83 minutes;college/university students

MOLECULAR WEIGHT DETERMINATION BY FREEZING POINT METHOD (freeze;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois

The lesson teaches the theory of freezing point depression when a solute is added to a solvent, and then the student performs a simulated experiment on the freezing point depression of benzene solutions.

none;81 minutes;students of general chemistry

Momentum

Center of mass

LOCATION OF CENTER OF MASS OF SYSTEM OF PARTICLES (kane;1976;1977)
Kane, Dennis
Physics Department, University of Illinois

In this drill on center of mass determination the student can move a cursor, by pressing arrow keys, to the center of mass of the system presented in the problem. The computer judges the student's solution. A calculator option is provided for the student to use in solving the problem. A different system is presented on each try of the drill.

none;5 minutes for each problem;college/university

EXERCISE ON CONSERVATION OF LINEAR MOMENTUM IN COLLISIONS (collide; 1976;unpublished)
Kane, Dennis
Physics Department, Univ. of Illinois, Urbana, IL

The lesson is a drill on the application of the principle of conservation of linear momentum for isolated systems (systems on which no external forces are acting). The system in the drill is a pair of objects on a frictionless surface (e.g. pucks on an air table). The drill may be repeated as often as desired.

none;open-ended;college/university students of classical mechanics

MOMENTUM (conserve;1971,1974;1977)
Sherwood, Bruce Arne; Kane, Dennis; Schultz, Charles
Physics Department, University of Illinois

This lesson is on the role of momentum in collisions with emphasis on conservation of momentum for isolated systems. It is expected that the student is familiar with two-dimensional kinematics including velocity and its vector description.

none;45 minutes;college/university students in introductory physics

TORQUE AND ANGULAR MOMENTUM (torque;1974;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois

The lesson presents the concepts of torque and angular momentum and includes drills on direction and magnitude of torques applied by a wrench (treatment is mainly two-dimensional). Angular momentum is calculated for a spinning and translating dumbbell. There is also an example of angular momentum conservation.

none;60 minutes;college/university students in introductory physics

Monitoring (Hospital care)

Fetal heart

FETAL HEART RATE MONITORING (monor;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.

This lesson familiarizes the student or registered nurse with the completely automatic fetal monitoring system to be used for fetal heart rate and uterine contraction monitoring.

helpful to have audio-cassette;30-45 minutes;RN's and nursing students

Morphine

CNS PHARMACOLOGY: ANALGESIA REVIEW (kumc32;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson discusses morphine-type analgesic agents.

none;15 minutes;first year medical students

Morse code

ROSE (rose;1976;1978)
Sleator, Daniel; Sleator, Tycho
University of Illinois
The first three sections of this lesson generate rose patterns. The final four sections are games: Conway's Game of Life; X,Y Equation Solver Game; Morse Battle Game; Brain-o-Battle.
none;open-ended;none

WELCOME TO MORSE II (morse;1979;unpublished)
Williams, Steven R; Hightower, Michael L
Comp.-based Educ. Res. Lab., University of Illinois
This program is designed so that by practice of Morse code receiving, the operator can increase his skills (particularly speed) of Morse reception. There are several drills with random letters (punctuation and numbers included) and words. Also available are the games "Wordwar" and "Codewar" where the operator attempts to break time/speed records of others.
Gooch Synthesizer, etc.;open-ended;Morse Code enthusiasts

Motivation (Psychology)

MOTIVATIONAL CONTROL SYSTEM MODEL (motcs;1974;1978)
Grohne, Thomas; Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
The object of this lesson is to explore the principles of a motivational control system. A very typical system, the control of hunger, is examined.
none;none;university/college students

Movement notation

CONTACT, SHIFT OF WEIGHT, FRONT (movement4;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.
This lesson discusses the notation of contact, shift of weight and front for purposes of movement analysis. It is last in a series of six lessons dealing with the Eshkol-Wachmann Movement Notation System.
none;approximately 30-40 minutes;college/university students

ESHKOL-WACHMANN MOVEMENT NOTATION, LESSON 2 (movement;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.
This lesson introduces the Eshkol-Wachmann Movement Notation System and presents the study material in such a way that students who have little or no knowledge of this notation system can acquire a basic knowledge of its symbols and their meanings, and be able to interpret certain positions and movements. Lesson two in a series of six.
none;approximately 30-40 minutes;college/university students

ESHKOL-WACHMANN MOVEMENT NOTATION SYSTEM (moveintro;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.
This lesson introduces the student to the Eshkol-Wachmann Movement Notation System, which is an instrument of communication, a means of recording all types of movement and a tool for analysis of movement. This is the first in a series of six lessons.
none;approximately 30-40 minutes;college/university students

MOVEMENT NOTATION (movement1;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.
This lesson discusses movement notation as a symbolic language for the description of human movement and the identifying system of reference. Lesson three in a series of six teaching the Eshkol-Wachmann Movement Notation System.
none;approximately 30-40 minutes;college/university students

PLANE MOVEMENTS (movement2;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.
This lesson discusses movements in horizontal planes, vertical planes and intermediate planes. This is number four in a series of six lessons teaching the Eshkol-Wachmann Movement Notation System.
none;approximately 30-40 minutes;college/university students

SIMULTANEOUS AND CONICAL MOVEMENTS (movement3;1974;unpublished)
Hoyman, Annelis S
Physical Education Department, U of I, Urbana, Ill.
This lesson discusses simultaneous movement, meaning movement of adjacent limbs at the same time or simultaneous changes in interrelationship of a group of adjacent limbs, and conical movement, where the sense of movement is determined by looking from the joint of the limb and outward. Lesson five of the Eshkol-Wachmann Movement Notation System.
none;approximately 30-40 minutes;college/university students

Multiplication

AREAS (zareas;1976;unpublished)
Steinberg, Esther R; Wax, Saul
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson provides the student with experience which relates multiplication and area.

The lesson was designed by Esther Steinberg.
none;three 10 minute segments, repeatable;elementary students

ARRAYS (zarrays;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson relates two multiplication number sentences to an array of dots. It also introduces the term "array".
none;three ten minute segments;intermediate level elementary students

CHAPTER CHECKUPS (zmodcheck;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson offers checkup problems for multiplication meanings, techniques and subtraction ("countdown" and "facts" methods), and the multiplication algorithm as well as division concepts.
none;open-ended;intermediate level elementary students

CHECK-UP ON MANY-DIGIT MULTIPLICATION (mult2check;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Felty, Michael
U of I NSF Whole Numbers Elem. Math. Group
The lesson tests the student's ability to use the standard algorithm to multiply several digit numbers by two- or three-digit numbers.
none;one 10 minute segment, repeatable;elementary students

CHECK-UP ON ONE-DIGIT MULTIPLICATION (multcheck;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Wilson, James H
U of I NSF Whole Number Elem. Math. Group
The lesson tests the student's ability to use the standard algorithm to multiply several digit numbers by a one-digit number.
none;one session with repeats if necessary;upper level elementary students

CLAIM GAME (FACTORS) (zclaim; 1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S
U of I NSF Whole Numbers Elem. Math. Group
The lesson gives the students practice in recognizing factors of numbers up to 36. It is a two person game.
none;open-ended;upper level elementary students

DOUBLE SIGNS (FLIPPING) AND MULTIPLICATION (PATTERNS) (signmult;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a concrete visual model for getting rid of double signs and a simple introduction to the rules for multiplying signed numbers.
none;15 minutes;basic mathematics students

EGG FACTORY (zcrate;1976;unpublished)
Seiler, Bonnie Anderson; Cohen, Paul
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson provides a model for experiences with renaming a number using the operations of multiplication and addition. The situation provides a natural reason for multiplication's preceding addition.
none;six 10 minute segments, 1 repeat;elem. students

EGG FACTORY WITHOUT THE HEN (znonhen;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson gives the student practice in interpreting certain number sentences in terms of the crate and basket model, without seeing a picture.
none;one 10 minute segment, repeatable;elem. students

INTRODUCTION TO MULTIPLICATION (wmg06;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
Counting practice is presented as an introduction to multiplication. The student or the teacher can set the level of difficulty for the problems.
none;none;elementary level students

INTRODUCTION TO MULTIPLYING MIXED NUMBERS (fmint;1976;1978)
Dugdale, Sharon; Kibbey, David; Bereiter, Marilyn
U of I NSF Fractions Elem. Math. Group, CERL
The lesson introduces the multiplication of mixed numbers using a familiar multiplication model. The student writes multiplication number sentences to describe arrays of boxes. Difficulty adjusts to the student's performance.
none;open-ended;students of basic mathematics

LARGE PARKING LOT (zparklot2;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Steinberg, Esther R; et al.
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson demonstrates one method for calculating the number of objects in a large array: breaking up the array into several smaller arrays.
none;2 10 minute segments, last one repeats;elementary students

LINES AND CROSSING POINTS (zcross; 1976;unpublished)
Steinberg, Esther R
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson provides a situation in which students make arrays that have specified products, and specified sums of factors.
none;five 10 minute segments;upper level elementary students

MAKE THE ARRAY (zarrays2;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson guides the student in making an array to illustrate a multiplication number sentence.
touch panel;two 10 minute segments;elem. students

MENTAL ARITHMETIC (wmg01; 1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
The program presents mental arithmetic problems involving addition, subtraction and multiplication. The problems are grouped according to difficulty. The student races against time. The solution time may be varied by the teacher and the computer then speeds up the allocated time as the participant becomes more proficient.
none;open-ended;elementary school children

MIXED DRILL + - × ÷ (wmg08;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides practice with addition, subtraction, multiplication and division.
none;none;elementary school children

MIXED NUMBER MULTIPLICATION PRACTICE (fmdrill;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson gives practice in multiplying mixed numbers. There is also a checkup included in the same file with the lesson.
none;lesson: 30-60 minutes, checkup: 5-10 minutes;students of basic math

MULTIPLICATION (run;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches multiplication of signed numbers by using a concrete visual model -- the running man.
none;45 minutes;basic mathematics students

MULTIPLICATION IS REPEATED ADDITION AND IS ARRAYS (zmultmeans;1976;unpublished)
Seiler, Bonnie Anderson; Arthur, Charles; Miller, Marc
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson relates multiplication to repeated addition and arrays. The models used in previous lessons (Rubber Stamp, Egg Factory, Parking Lot) are mentioned along with new contexts.
none;two ten minute sessions;intermediate level elementary students

MULTIPLICATION MISSION IMPOSSIBLE (zmulttech;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson provides practice using a variety of techniques in order to solve problems selected by PLATO.
none;2 10 minute segments to be repeated;elementary students

MULTIPLICATION OF SIGNED NUMBERS (postmult;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is a model for the operation of multiplication of signed numbers to enable the student to work with statements like $+2 \times -3 = -6$.
none;10 minutes;elementary mathematics students

MULTIPLICATION PRACTICE, WITH PICTURES FOR HELP (fmpix;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson offers practice in multiplication of mixed numbers, with a familiar model available as the student needs it.
none;open-ended;students of basic mathematics

MULTIPLICATION USING WHAT YOU KNOW (zwhat;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson provides practice for using the distributive law to work multiplication problems; that is, to work multiplication problems by adding together the answers to related smaller problems.
none;none;intermediate level elementary students

MULTIPLY BY BREAKING UP (zbreak;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Campanini, Sue
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson introduces the technique of "breaking up a number" in order to solve a multiplication problem. The lesson is another in the series on multiplication techniques. The objective is to teach the student how to use the right distributive law to solve multiplication problems.
none;three ten minute segments;intermediate level elementary students

MULTIPLY BY BUILDING UP (zmultaccum;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Campanini, Sue
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson is another in the series on multiplication techniques. This one demonstrates that a multiplication problem can be solved by building up from an easy problem to the final one.
none;two ten minute sessions;intermediate level elementary students

MULTIPLY BY DOUBLING (zdouble;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson in the series on multiplication techniques introduces "doubling" as a technique in solving multiplication problems. The student is taught how to double and redouble one factor in order to solve such a problem.
touch panel;two ten minute sessions;elementary students

MULTIPLY BY 10'S AND 100'S (zmulta2;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Felty, Michael
U of I NSF Elem. Math. Group
The lesson teaches the student to multiply by numbers having one non-zero digit using the standard algorithm, multiplication by the one digit number and "adding zeros" as in a problem like 768X200.
none;one or two 10 minute sessions, repeatable;elementary students

MULTIPLY ON THE NUMBERLINE (zmline;1976;unpublished)
Seiler, Bonnie Anderson; Weaver, Charles S; Wilson, James H
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson introduces the technique of using the numberline to solve multiplication problems.
none;open-ended;intermediate level elementary students

MULTIPLY USING ADDITION (zfiguring;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson is the first of a series on the seven techniques of multiplication, especially relating the techniques to the meanings of multiplication that were covered in other lessons. There are no explicit references to the efficiency or suitability of a given technique for a given problem. It is hoped the student will learn this through exploration.
touch panel;two 10 minute segments;elem. students

MULTIPLY USING ARRAYS (zfiguringa;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson in the series on multiplication techniques relates the arrays meaning of multiplication to general multiplication problem solving.
touch panel;two 10 minute sessions;elem. students

MULTIPLYING BY LARGE NUMBERS (zmultalg;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson teaches the multiplication algorithm in a way that relates it to previously taught techniques.
none;3 to 5 ten minute sessions, repeatable;elementary students

ONE-DIGIT ALGORITHM INTRODUCTION (zmultal;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Felty, Michael
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson teaches the algorithm for multiplying by one-digit numbers in a way that fosters understanding of its meaning.
none;2 - 5 sessions, sometimes repeated;elementary students

PARKING LOT (zparklotl;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Steinberg, Esther R; et al.
U of I NSF Elem. Math. Group, Urbana, Illinois
This lesson provides experience with arrays, allowing students to determine the total number of objects by any method he chooses. Suggests student form an answer as soon as there is one car in each row and in each column. Serves as a readiness lesson for "Cutting Large Parking Lots".
none;2 10 minute segments, repeatable;elementary students

RUBBER STAMP AND MORE RUBBER STAMP (zstamp;1976;unpublished)
Leiser, David; Fortner, Brand; Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson introduces a model which later relates repeated addition to multiplication. It emphasizes the correspondence between a picture and a number sentence, and it shows how an addition number sequence can be interpreted in words.
touch panel;4 ten minute segments;elem. students

SKIP COUNTING (wmg05;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This program is an exercise in counting by 5's, or other numbers. Three levels of difficulty are offered the student.
none;none;elementary school children

SLIDE RULE (srl;1976;1978)
Lederman, Barbara; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and practice in the use of a slide rule for multiplication and division problems.
slide rule;3.5 hours;students of technical math or physical science

THE STEP BY STEP METHOD OF MULTIPLYING (zbill2;1975;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Bonetti, William
U of I NSF Whole Numner Elem. Math. Group
The lesson gives the student practice in solving multiplication problems using the "on paper" vertical method. He may let PLATO present problems to him or make up his own.
none;open-ended;upper level elementary students

STRATEGIES FOR MULTIPLYING MIXED NUMBERS (fmstrat;1976;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Fractions Elem. Math. Group, CERL
The lesson demonstrates that there are many ways to multiply mixed numbers. It encourages the student to examine each problem and to choose a method appropriate for the particular problem.
none;open-ended;students of basic mathematics

WAYS TO MULTIPLY (zmultiply;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson provides practice with the techniques of multiplication and emphasizes that there are many different ways to solve a multiplication problem.
none;one ten minute segment with repeats possible;elementary students

Multivariate analysis

EIGENVALUES AND EIGENVECTORS
(yeigen5;1976;1978)
Tatsuoka, Kikumi; Baillie, Robert
Computer-based Educ. Res. Lab., University of Illinois
This lesson is the second in a series of lessons on matrix algebra as applied to multivariate statistics. The lesson deals with eigenvalue problems. A glossary of matrix words is furnished also.
none;60 minutes;college/university undergraduate, graduate students

GENERAL STATISTICS AND MATRIX MANIPULATIONS SUBROUTINE PACK.
(genstat;1977;1978)
Kraatz, James M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson contains several utility programs for performing matrix manipulations and is of particular use to those interested in the area of multivariate statistics. The programs have been designed to be accessed via the -use- command.
none;open-ended;none

INTRODUCTION TO MATRICES -- SIMPLE OPERATIONS (yeigen4;1976;1978)
Tatsuoka, Kikumi
Computer-based Educ. Res. Lab., University of Illinois
This lesson is the first in a series of lessons on matrix algebra as applied to multivariate statistics. The lesson deals with simple operations with matrices such as transpositions, addition, subtraction and scalar multiplication.
none;20 minutes;college/university undergraduate and graduate students

MATRICES AND LINEAR TRANSFORMATIONS
(ytrans; 1976;1978)
Tatsuoka, Kikumi; Baillie, Robert
Computer-based Educ. Res. Lab., University of Illinois
This lesson is the fourth in a series of lessons on matrix algebra as applied to multivariate statistics. The lesson deals with matrices and linear tranformations.
none;60 minutes;college/university undergraduate and graduate students

MATRIX MULTIPLICATION
(ymult2;1976;1978)
Tatsuoka, Kikumi
Computer-based Educ. Res. Lab., University of Illinois
This lesson is the third in a series of lessons on matrix algebra as applied to multivariate statistics. The lesson deals with the multiplication of matrices.
none;40 minutes;college/university undergraduate and graduate students

MULTITRAIT MULTIMETHOD MATRICES (mmmatrixx;1974;unpublished)
Cohen, Jerry L; Klesh, John R
Psychology Department, University of Illinois
This lesson teaches the use of Multitrait Multimethod Matrices as a somewhat idealized procedure for validating measurement instruments. The matrix contains all of the intercorrelations which result when each of several traits is measured by each of several methods.
none;none;psychology students

MULTIVARIATE ANALYSIS PACKAGE (multvar;1977;1978)
Kraatz, James M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson is a multivariate analysis package including multiple correlation and regression, discriminant analysis, general matrix manipulations and factor rotations.
none;open-ended;college/university students

Musculoskeletal system

FUNCTIONAL MECHANICS OF VENTILATION (shp30;1974;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson dicusses the muscular-skeletal interaction in ventilation, the basic embryological development of the pleural cavity, respiratory pressures, pulmonary volumes and capacities, and alveolar ventilation.
none;4 1/2 hours;physicians' assistants

GROSS ANATOMY OF THE THORACIC CAGE (shp90;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson presents the anatomy of the thoracic cage.
none;90 minutes;physicians' assistants

SKELETAL MUSCLE PHYSIOLOGY, PART I (averager;1978;unpublished)
Schooley, Ralph E; Denault, John M; Collins, Thomas J
Department of Biophysics, University of Illinois
This lesson is designed to introduce the student to the fundamentals of skeletal muscle physiology at the molecular level and to acquaint the student with the response of skeletal muscle stimulation.
none;none;first year medical students

SKELETAL MUSCLE PHYSIOLOGY, PART II (neuron2;1978;unpublished)
Schooley, Ralph E; Cooper, Kim; Collins, Thomas J
School of Basic Medical Sciences, Univ. of Illinois
This lesson is designed to acquaint the student with the response of skeletal muscle to stimulation. Emphasis is placed on isometric and isotonic contractions and relation between stimulus and response. Tension-length curves, force-velocity curves and power-load curves are discussed.
none;45 minutes;first year medical students

SKELETAL MUSCLE PHYSIOLOGY - COMPREHENSIVE QUIZ (ral;1978;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois
This lesson is designed to quiz the student over the fundamentals of skeletal muscle physiology at the molecular level as well as over the response of skeletal muscle to external stimulation.
none;30 minutes;first year medical students

Music

Conducting

MUSICAL TERMS FOR STUDENT CONDUCTORS (conduct1;1976;1977)
Peters, G. David
School of Music, University of Illinois
This lesson has been designed as a review of musical terms necessary for the understanding of standard musical scores. The lesson has been written in several sections, and may be reviewed by section before moving to the final, randomized exam.
none;none;university level

Music education lessons

HAND SIGNALS - SOLMIZATION (emus2;1976;1977)
Flohr, John W
Music Department, U of Illinois, Urbana IL
This music lesson is designed to teach the use of hand signals as a visual aid in the development of singing. Solmization is the term for systems which designate the notes in a scale by syllables.
none;none;college/university

Piano

KEYBOARD DRILL (musgame3;1976;1977)
Nakada, Mark W; Kraatz, James M
School of Music, University of Illinois

This drill is intended to aid beginning piano students in learning how to (1) read the music staff and (2) identify the corresponding note on the piano.

none;none;none

Statistics

AN INTRODUCTION TO "T" TEST (mustat;1976;1976)
Sanders, William H
School of Music, University of Illinois

The "t" Test is used to determine the significance of the difference between the means of two sets of scores. If you have given the same test to two of your classes and you wish to statistically compare the two sets of grades, the "t" Test is helpful.

pencil and paper; pocket calculator helpful;none;music research classes

Theory and fundamentals

INTERVAL LESSON (minterval;1977;1978)
Murray, Kate Rushford
Department of Music, U of I, Urbana, Ill.

This lesson is designed to aid the student in the identification of musical intervals. It includes major, minor, augmented and diminished intervals. Only the treble clef has been used.

none;none;music theory students

INTRODUCTION TO SCALES (musfund4;1976;1977)
Beiermann, Dennis J
School of Music, University of Illinois

This lesson is designed to teach a student all about major scales --- what they are, how they're constructed. Practice in building some scales is also given in this lesson.

none;none;university

KEY SIGNATURES (mustheory2;1976;1977)
Murray, David J
School of Music, University of Illinois

This lesson will teach the naming of key signatures. A prerequisite is the understanding of the purpose of key signatures, their effect on sound and the entire concept of "key".

none;none;college/university

KEYBOARD DRILL (musgame3;1976;1977)
Nakada, Mark W; Kraatz, James M
School of Music, University of Illinois
This drill is intended to aid beginning piano students in learning how to (1) read the music staff and (2) identify the corresponding note on the piano.
none;none;none

THE KEYSPINNER GAME (musgame2;1976;1977)
Peters, G. David
Music Department, University of Illinois
This music game is a drill on major and minor key signatures. A spinner randomly selects a key signature. The player must type the key corresponding to the key signature within 10 counts. A choice is given of major or minor key signature identification drills. Two players can compete against each other in the game.
none;none;college/university music students

A LESSON IN MUSIC FUNDAMENTALS (emus;1975;1978)
Placek, Robert; Peters, G. David
Music Department, University of Illinois
This elementary lesson deals with notes, rests and time signatures.
none;open-ended;elementary - university

MUSIC CONCENTRATION (musgame8;1977;1978)
Whitfield, Janice; Rassier, Daniel A
University of Illinois
The purpose of this game, which is to be played by two, is to examine your music voacbulary. The object of the game is to match the correct term with the correct symbol.
touch panel;open-ended;elementary music students

Voice

EXERCISES IN VOCAL DICTION (musvocal;1976;1978)
Gieszelman, Diane L; Sanders, William H
Music Department, University of Illinois
The lesson is designed to provide an introduction to the vocal articulators and their uses. It is intended as a supplement to any textbooks or reference books on the subject.
none;none;music students taking voice instruction

Music, Romantic

ROMANTIC ERA COMPOSERS (mus421g;1977;1978)
Watanabe, Nan T; Fonder, Mark; Rassier, Daniel A
Music Department, U of I, Urbana, Ill.
This is a thirty-item quiz on the Romantic Era composers. There are three clues available for each question to aid the user in supplying the correct answer.
none;none;general

Musical notation

INTRODUCTION TO SCALES (musfund4;1976;1977)
Beiermann, Dennis J
School of Music, University of Illinois

This lesson is designed to teach a student all about major scales --- what they are, how they're constructed. Practice in building some scales is also given in this lesson.

none;none;university

KEY SIGNATURES (mustheory2;1976;1977)
Murray, David J
School of Music, University of Illinois

This lesson will teach the naming of key signatures. A prerequisite is the understanding of the purpose of key signatures, their effect on sound and the entire concept of "key".

none;none;college/university

KEYBOARD DRILL (musgame3;1976;1977)
Nakada, Mark W; Kraatz, James M
School of Music, University of Illinois

This drill is intended to aid beginning piano students in learning how to (1) read the music staff and (2) identify the corresponding note on the piano.

none;none;none

THE KEYSPINNER GAME (musgame2;1976;1977)
Peters, G. David
Music Department, University of Illinois

This music game is a drill on major and minor key signatures. A spinner randomly selects a key signature. The player must type the key corresponding to the key signature within 10 counts. A choice is given of major or minor key signature identification drills. Two players can compete against each other in the game.

none;none;college/university music students

A LESSON IN MUSIC FUNDAMENTALS (emus;1975;1978)
Placek, Robert; Peters, G. David
Music Department, University of Illinois

This elementary lesson deals with notes, rests and time signatures.

none;open-ended;elementary - university

MUSIC CONCENTRATION (musgame8;1977;1978)
Whitfield, Janice; Rassier, Daniel A
University of Illinois

The purpose of this game, which is to be played by two, is to examine your music voacbulary. The object of the game is to match the correct term with the correct symbol.

touch panel;open-ended;elementary music students

TRANSPOSITION (transpose2;1977;unpublished)
Bartlett, Judith A
School of Music, University of Illinois
This is a program to write music and transpose it. Four staffs may be used at one time and choices of clef, notes and key are provided.
none;open-ended;students of music and composition

Musical pitch
INTONATION TRAINING (muspercept;1977;unpublished)
Segre, Alberto; Sorrentino, Tony
School of Music, U of I, Urbana, Illinois
This lesson is intended as an aid in improving listening abilities. The specific goals are to improve one's discrimination of "sharpness" and "flatness" and to increase one's ability to hear smaller pitch deviations; specifically, from a maximum deviation of 15 cents to a deviation of 5 cents or less.
music box;none;student conductors and musicians

SOLFA ... MELODIC DICTION (musik1;1976;unpublished)
Williams, Mark A
School of Music, U of I, Urbana, Illinois
This lesson is designed to supplement solfa studies in eartraining and melodic diction.
music box;open-ended;music students

Mutation breeding
POPULATION GENETICS: HARDY-WEINBERG PRINCIPLE (popgen;1974;1978)
Grossman, Michael; Walter, David
Dept. of Dairy Science, Univ. of Ill., Urbana, IL
The student is shown how to deduce the effects of mutation, migration, selection and drift on gene frequency by observing various simulations. Familiarity with the Hardy-Weinberg principle and its assumptions is assumed.
none;10 minutes per simulation;college and university students of genetics

Mutation (Biology)
POPULATION GENETICS (hpopgen;1977;unpublished)
Daniel, William; Seyfried, Thomas; Brenner, Lisa; et al.
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides primary instruction in the basics of population genetics. The Hardy-Weinberg equilibrium is reviewed and mutation, migration, selection and drift are discussed. Emphasis is on leading the student toward understanding the concepts, and acquiring competence in executing the associated calculations.
none;none;first year medical students

Mycobacterial disease

TUBERCULOSIS ON AN EGG FARM IN MAINE (tbc;1977;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson, based on material in "Morbidity and Mortality Weekly" published by the Center for Disease Control, Atlanta, Georgia, presents a case of a positive TB skin test on a man refusing to be further examined. The student is asked pertinent questions throughout the lesson.
none;5-10 minutes;medical students

Mycology

REVIEW OF LABORATORY MYCOLOGY FOR LABORATORY TECHNOLOGISTS (miccarle1;1976;unpublished)
Koehler, Janice Herbeck
Carle Foundation Hospital, Urbana, Illinois
This is a self-assessment exercise for laboratory technology students which tests knowledge of clinical mycology. Terminology, media and environment, and organisms are covered.
none;open-ended;students of medical technology

Mycosis

GRANULOMATOUS INFECTIONS OF THE RESPIRATORY SYST. (granuloma;1977;unpublished)
Leveridge, C. Tony; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathologic entities of pulmonary tuberculosis and sarcoidosis, as well as dealing with mycotic infections and coin lesions in the context of granulomatous conditions. The material is highly indexed, facilitating access to specific areas.
optional touch panel;none;first year medical students

Mycotoxins

MICROBIAL TOXINS I: ALGAL AND FUNGAL SPECIES (microtox;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
The lesson is one of a series on pathogenicity through toxin production. Basic and clinical information concerning algal and fungal toxins is presented. The purpose of the lesson is to make the student aware of such toxins, which are often ignored in favor of bacterial toxins.
slide selector, microfiche;10 minutes;first year medical students

Myoglobin

THE STRUCTURE OF HEMOGLOBIN AND MYOGLOBIN (hemocopy;1976;unpublished)
Bucci, Enrico; Bender, Jeffrey; Faith, Gregory; et al.
School of Medicine, Univ. of Maryland, Baltimore
This lesson presents the basic structural components of the oxygen-carrying protein in man. The quaternary structure of hemoglobin and the most important conformational changes that are produced by oxygenation are represented graphically.
none;15 minutes;first year medical students

Natural selection

NATURAL SELECTION - A CONTRIBUTOR TO MICROEVOLUTION (moths;1974;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses animation and graphic display to place the student in the role of "predator" of three phenotypic varieties of moths in a variable environment. Students must "hunt" moths and provide the selection pressure to make moth populations "evolve" across several generations of selection.
none;60-90 minutes;university/college zoology students

NATURAL SELECTION - A CONTRIBUTOR TO MICROEVOLUTION (INTRO) (moth2;1974;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses tutorial and graphic techniques to provide a working background for studying microevolution. Hardy-Weinberg equations are solved and graphed for population with and without selection. The concept of a stable gene frequency equilibrium is demonstrated.
none;45 minutes;university/college zoology students

POPULATION GENETICS (hpopgen;1977;unpublished)
Daniel, William; Seyfried, Thomas; Brenner, Lisa; et al.
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides primary instruction in the basics of population genetics. The Hardy-Weinberg equilibrium is reviewed and mutation, migration, selection and drift are discussed. Emphasis is on leading the student toward understanding the concepts, and acquiring competence in executing the associated calculations.
none;none;first year medical students

Navigation (Aeronautics)

AIRCRAFT TAKE OFF AND LANDING PERFORMANCE ANALYSIS (aero3;1979;1980)
Everett, Kenneth N
Comp.-based Educ. Res. Lab., Univ. of Illinois
This lesson provides utilities for analyzing data provided by the user dealing with flight vehicles. Graphs and tables presenting take off or landing distance are generated from the data provided versus the flight characteristic of lift coefficient.
none;open-ended;freshmen aeronautics students

WIND TRIANGLES (wind;1978;unpublished)
Trollip, Stanley R
Institute of Aviation, U of I, Urbana, Illinois
This lesson describes the E6b Computer used to solve wind triangle problems and presents problems for practice.
none;none;students of aviation

Neck

ANATOMY QUIZ: THE NECK (anaquiz6;1976;unpublished)
Gaburo, K; McCormick, R; Kahn, Madelyn I
School of Basic Medical Sciences, Univ. of Illinois
This lesson features five separate areas - each area presenting questions in a different format (e.g., multiple choice or matching). The content includes neck spaces, triangles, neural and blood supply, and ligaments and muscles. Student's score on the quiz is presented and evaluated.
none;15 minutes;first year medical students

Nephrology

INTRODUCTION TO RENAL FUNCTION (kidney;1976;unpublished)
Rikel, James E; Cohen, Paul
University of Southern California
This lesson provides introductory information and diagrams about the kidney and renal function.
none;15 minutes;first year medical students

PHYSIOLOGY OF ADH (ANTIDIURETIC HORMONE) (physadh;1978;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the Univ. of Illinois
This lesson discusses the synthesis, release and action of the antidiuretic hormone.
none;20 minutes;first year medical students

RENAL PHYSIOLOGY - BODY FLUIDS IV: FLUID COMPARTMENT MECH. (bfcom3;1978;unpublished)
McCraw, Gordon W; Lawrance, David P; Sommers, Jack M; et al.
Oklahoma University Health Sciences Center
This lesson presents a description of the fluid inputs and outputs of the body, including a description of the body's fluid compartments, with an associated fluid input/output chart for student practice and a post test for adequate feedback.
none;15 minutes;first year medical school

RENAL PHYSIOLOGY - BODY FLUIDS PART II: FLUID COMPARTMENTS (bfcom1;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
In this lesson the student will become familiar with total body water, extracellular, interstitial and intracellular fluids, and lean body mass.
none;15 minutes;first year medical students

RENAL PHYSIOLOGY - BODY FLUIDS PART I: OSMOTIC FORCES (bfcom4;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
In this lesson the student is presented with the material that must be mastered prior to studying renal physiology. Under the heading of osmotic forces, solute concentration, osmolality, the components of plasma and the significance of the anion gap are the subjects discussed.
none;20 minutes;first year medical students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART I (bbcarle4a;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This is the first of a lesson series on renal function and laboratory evaluation and provides students with a basic understanding of renal physiology and function.
none;none;1st year med. and med. tech. students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART II (bbcarle4;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This is second in a series of three lessons, and familiarizes the student with the laboratory tests used in urinalysis, the evaluation of renal function and the principles behind these tests.
none;none;1st year med. and med. tech. students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART III (bbcarle4c;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson provides the quiz over the first two parts of this series and offers the student a chance for self-assessment over renal function and laboratory evaluation.
none;none;1st year med. and med. tech. students

Nephrology--Examinations, questions, etc.

PHYSIOLOGY OF ADH (ANTIDIURETIC HORMONE) (physadh;1978;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the Univ. of Illinois
This lesson discusses the synthesis, release and action of the antidiuretic hormone.
none;20 minutes;first year medical students

RENAL PHYSIOLOGY - BODY FLUIDS IV: FLUID COMPARTMENT MECH.
(bfcom3;1978;unpublished)
McCraw, Gordon W; Lawrance, David P; Sommers, Jack M; et al.
Oklahoma University Health Sciences Center
This lesson presents a description of the fluid inputs and outputs of the body, including a description of the body's fluid compartments, with an associated fluid input/output chart for student practice and a post test for adequate feedback.
none;15 minutes;first year medical school

RENAL PHYSIOLOGY - BODY FLUIDS PART II: FLUID COMPARTMENTS
(bfcom1;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
In this lesson the student will become familiar with total body water, extracellular, interstitial and intracellular fluids, and lean body mass.
none;15 minutes;first year medical students

RENAL PHYSIOLOGY - BODY FLUIDS PART I: OSMOTIC FORCES (bfcom4;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
In this lesson the student is presented with the material that must be mastered prior to studying renal physiology. Under the heading of osmotic forces, solute concentration, osmolality, the components of plasma and the significance of the anion gap are the subjects discussed.
none;20 minutes;first year medical students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART III
(bbcarle4c;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson provides the quiz over the first two parts of this series and offers the student a chance for self-assessment over renal function and laboratory evaluation.
none;none;1st year med. and med. tech. students

Nerves

ACTION POTENTIALS OF SINGLE NERVE FIBERS (actpot;1976;unpublished)
Woods, James; Giles, Steven; Conen, Paul
Oklahoma University Health Sciences Center
This lesson reviews some basic topics on the physiology of neurons and considers the theoretical background of action potentials in single nerve fibers.
none;15 minutes;first year medical students

NEUROPHYSIOLOGY LABORATORY (actpot2;1977;unpublished)
Woods, James; Lawrance, David P; McCraw, Gordon W; et al.
University of Oklahoma / University of Illinois

This lesson is designed for the student of electrophysiology. A simulation of typical electrophysiologic laboratory procedures and concepts such as graded stimuli, spatial summation and temporal summation are presented.

none;open-ended;first year medical or graduate students

Nerves, Cranial

ANATOMY QUIZ: THE HEAD (anaquiz1;1976;unpublished)
Kahn, Madelyn I; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson features six separate areas - each area presenting questions in a different format (e.g., multiple choice or sequencing). The content includes arteries and veins, nerves and plexuses, muscles and ligaments, bony markings, sinuses and eyeball muscles. Student's score on the quiz is presented and evaluated.

none;15 minutes;first year medical students

BIG CITY NEUROLOGIST AND MRS. CRIBBLECROBBLES (curtiss19;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois

This lesson presents a case study review of the findings of a classical brain tumor syndrome.

none;10-20 minutes;students of occupational therapy, medical students

CRANIAL NERVE REVIEW AND DRILL (curtiss17;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine of the Univ. of Illinois

This lesson provides a review of cranial nerve functions via tables and drills.

none;15 minutes;students of occupational therapy

STROKE SYNDROME CASE STUDY I (curtiss18;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois

This lesson presents a case study reviewing the classic findings of a relatively common stroke syndrome.

optional touch panel;10-20 minutes;occup. therapy and med. students

STROKE SYNDROME CASE STUDY II (curtiss21;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois

This lesson presents a case study review of a very common stroke syndrome of the elderly.

none;5-10 minutes;students of occupational therapy, medical students

Nerves, Peripheral

INTRO. TO THE HUMAN NERVOUS SYSTEM: DERMATOMES (derma;1976;unpublished)
Wadsworth, Gladys E; McDiarmid, Melissa A
School of Medicine, Univ. of Maryland, Baltimore
This lesson defines the term "dermatome" and presents schematically the effect of overlapping of contiguous segments. It illustrates the dermatomal pattern of the upper limb and compares the sensory innervation of a spinal nerve with that of a peripheral nerve.
none;15 minutes;first year medical students

Nerves, Spinal

INTRODUCTION TO THE HUMAN NERVOUS SYSTEM: NERVE PLEXUSES (nervplex;1976;unpublished)
Wadsworth, Gladys E; Bennett, Charles
School of Medicine, Univ. of Maryland, Baltimore
This lesson describes the plexuses derived from ventral rami of spinal nerves. It develops schematically the major structural components of the brachial plexus and relates the effect severance of these components has upon the muscles they innervate.
none;15 minutes;first year medical student

INTRO. TO HUMAN NERVOUS SYSTEM: SPINAL NERVES (nervsyst2;1976;unpublished)
Wadsworth, Gladys E; Kroll, Martin
School of Medicine, University of Maryland, Baltimore
This lesson enumerates the segmental nerves and illustrates the components of a typical spinal nerve. Characteristics of the ventral rami of thoracic nerves are presented graphically. Shown schematically is the structure of motor and sensory neurons and the visceral motor pathway of the sympathetic division of the autonomic nervous system.
none;15 minutes;first year medical students

MYSTERIOUS SPINAL CD CASE III:NEUROGENIC BLAD. (curtiss14;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the bladder emptying reflex, and differentiation between the flaccid and spastic neurogenic bladder.
none;5-10 minutes;students of occupational therapy, medical students

MYSTERIOUS SPINAL CD. CASE II: THE BROWN SEQUARD SYNDROME (curtiss13;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson is a simulated case study of the expected findings in the Brown-Sequard Syndrome correlated with the functional neuroanatomical findings. If certain key questions are missed, remedial information is provided.
optional touch panel;5-15 minutes;occup. therapy and med. students

MYSTERIOUS SPINAL CD. CASE IV: ANTER. SPINAL ART. OCCLUSION (curtiss15;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides review of the expected clinical findings of the anterior spinal artery occlusion syndrome, correlated with expected neuroanatomical defects.
none;5-10 minutes;students of occupational therapy, medical students

MYSTERIOUS SPINAL CD. CASE I: THE TUMOR AND MRS. X (curtiss12;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the functional neuroanatomy of selected spinal cord tracts, deep tendon reflexes, and reflex arcs, with remedial instruction made available when key questions are missed. Also covered is the level localization of a spinal cord lesion.
optional touch panel;10-15 minutes;occup. therapy and med. students

SPINAL NERVE LESION (curtiss10;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a simulated case of a spinal nerve lesion with remedial information available when certain key questions are missed.
none;10-20 minutes;students of occupational therapy, medical students

Nerves--Anatomy

CRANIAL NERVE REVIEW AND DRILL (curtiss17;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine of the Univ. of Illinois
This lesson provides a review of cranial nerve functions via tables and drills.
none;15 minutes;students of occupational therapy

Nervous system

ACTION POTENTIALS OF SINGLE NERVE FIBERS (actpot;1976;unpublished)
Woods, James; Giles, Steven; Cohen, Paul
Oklahoma University Health Sciences Center
This lesson reviews some basic topics on the physiology of neurons and considers the theoretical background of action potentials in single nerve fibers.
none;15 minutes;first year medical students

INTRODUCTION TO THE HUMAN NERVOUS SYSTEM: NERVE PLEXUSES (nervplex;1976;unpublished)
Wadsworth, Gladys E; Bennett, Charles
School of Medicine, Univ. of Maryland, Baltimore
This lesson describes the plexuses derived from ventral rami of spinal nerves. It develops schematically the major structural components of the brachial plexus and relates the effect severance of these components has upon the muscles they innervate.
none;15 minutes;first year medical student

INTRO. TO HUMAN NERVOUS SYSTEM: SPINAL NERVES (nervsyst2;1976;unpublished)
Wadsworth, Gladys E; Kroll, Martin
School of Medicine, University of Maryland, Baltimore
This lesson enumerates the segmental nerves and illustrates the components of a typical spinal nerve. Characteristics of the ventral rami of thoracic nerves are presented graphically. Shown schematically is the structure of motor and sensory neurons and the visceral motor pathway of the sympathetic division of the autonomic nervous system.
none;15 minutes;first year medical students

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Wadsworth, Gladys E; McDiarmid, Melissa A
School of Medicine, Univ. of Maryland, Baltimore
This lesson defines the term "dermatome" and presents schematically the effect of overlapping of contiguous segments. It illustrates the dermatomal pattern of the upper limb and compares the sensory innervation of a spinal nerve with that of a peripheral nerve.
none;15 minutes;first year medical students

INTRO. TO THE HUMAN NERVOUS SYSTEM: SPINAL CORD (nervsyst;1976;unpublished)
Wadsworth, Gladys E; Kroll, Martin
School of Medicine, University of Maryland, Baltimore
This lesson is composed of two subunits: part one identifies the three subsystems into which the nervous system is classified, and part two describes the fundamental external and internal structures of the spinal cord as well as the meninges and their relationship to each other. The sources of the blood supply to the spinal cord are discussed briefly.
none;35 minutes;first year medical students

NEURON STRUCTURES AND FUNCTION (neurons;1976;1977)
Boggs, Stephen H
CERL, University of Illinois
The lesson presents information on neuron structures, action potentials, a threshold experiment, the synapse, and on integration.
none;38 minutes;college/university students

NEUROPHYSIOLOGY LABORATORY (actpot2;1977;unpublished)
Woods, James; Lawrance, David P; McCraw, Gordon W; et al.
University of Oklahoma / University of Illinois
This lesson is designed for the student of electrophysiology. A simulation of typical electrophysiologic laboratory procedures and concepts such as graded stimuli, spatial summation and temporal summation are presented.
none;open-ended;first year medical or graduate students

NEUROPHYSIOLOGY REVIEW (kumc39;1975;unpublished)
Felty, Michael; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois
This lesson provides a review and test for the materials covered in PLATO neurophysiology lessons.
none;open-ended;first year medical students

THE PHYSIOLOGICAL BASIS OF LEARNING (plearn;1976;1977)
Boggs, Stephen H
CERL, University of Illinois
The lesson explains the physiological basis of learning. It assumes the student is familiar with neuron structure and function.
none;30 minutes;college/university students

SKELETAL MUSCLE PHYSIOLOGY, PART I (averager;1978;unpublished)
Schooley, Ralph E; Denault, John M; Collins, Thomas J
Department of Biophysics, University of Illinois
This lesson is designed to introduce the student to the fundamentals of skeletal muscle physiology at the molecular level and to acquaint the student with the response of skeletal muscle stimulation.
none;none;first year medical students

SKELETAL MUSCLE PHYSIOLOGY - COMPREHENSIVE QUIZ (ral;1978;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois
This lesson is designed to quiz the student over the fundamentals of skeletal muscle physiology at the molecular level as well as over the response of skeletal muscle to external stimulation.
none;30 minutes;first year medical students

SPINAL CORD ANATOMY, A CLINICAL APPROACH (curtiss5;1977;unpublished)
Dubrick, Anton J; Curtis, Brian A
Peoria School of Medicine of the Univ. of Illinois
This lesson covers basic cord anatomy, spinal nerve roots, discs, reflexes and major spinal tracts. A quiz and clinically oriented practice drills are included.
touch panel;15 minutes;first year medical students

Nervous system, Autonomic
see Autonomic nervous system

Nervous system, Central
see Central nervous system

Nervous system--Tumors

MYSTERIOUS SPINAL CD. CASE III:NEUROGENIC BLAD. (curtiss14;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the bladder emptying reflex, and differentiation between the flaccid and spastic neurogenic bladder.
none;5-10 minutes;students of occupational therapy, medical students

Nervous system--Wounds and injuries

MR. Q'S DILEMMA, OR DIFFERENT STROKES FOR DIFFERENT FOLKS (strokes;1977;unpublished)
Curtis, Brian A; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson in clinical neurology touches on cerebrovascular accidents and the expected course, upper and lower motor neuron lesions, and spinal cord lesions.
touch panel;45-60 minutes;occup. therapy and med. students

MYSTERIOUS SPINAL CD. CASE III:NEUROGENIC BLAD. (curtiss14;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the bladder emptying reflex, and differentiation between the flaccid and spastic neurogenic bladder.
none;5-10 minutes;students of occupational therapy, medical students

MYSTERIOUS SPINAL CD. CASE II: THE BROWN SEQUARD SYNDROME (curtiss13;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson is a simulated case study of the expected findings in the Brown-Sequard Syndrome correlated with the functional neuroanatomical findings. If certain key questions are missed, remedial information is provided.
optional touch panel;5-15 minutes;occup. therapy and med. students

MYSTERIOUS SPINAL CD. CASE IV: ANTER. SPINAL ART. OCCLUSION (curtiss15;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides review of the expected clinical findings of the anterior spinal artery occlusion syndrome, correlated with expected neuroanatomical defects.
none;5-10 minutes;students of occupational therapy, medical students

MYSTERIOUS SPINAL CD. CASE I: THE TUMOR AND MRS. X (curtiss12;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the functional neuroanatomy of selected spinal cord tracts, deep tendon reflexes, and reflex arcs, with remedial instruction made available when key questions are missed. Also covered is the level localization of a spinal cord lesion.
optional touch panel;10-15 minutes;occup. therapy and med. students

SPINAL NERVE LESION (curtiss10;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a simulated case of a spinal nerve lesion with remedial information available when certain key questions are missed.
none;10-20 minutes;students of occupational therapy, medical students

Network analysis

CONVENTIONAL CURRENT (elenan3;1975;unpublished)
Weston, Paul; Yen, Bob
Dept. of Electrical Engineering, Univ. of Illinois
This introductory exercise on network analysis presents a simple illustration of current as the net flow of positive charge.
none;5 minutes;undergraduate students of electrical engineering

THE RESISTOR (resistor;1975;unpublished)
Weston, Paul; Yen, Bob
Dept. of Electrical Engineering, Univ. of Illinois
This exercise provides drill material on Ohm's law and the resistor.
none;26 minutes;undergraduate electrical engineering students

RL AND RC TRANSIENTS (rlrc;1975;unpublished)
Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This exercise provides the student with practice using single time-constant RL and RC networks with step sources. Help is available as well as descriptions of the various parameters.
none;none;undergraduate electrical engineering students

RLC: PARALLEL RLC CIRCUIT ANALYSIS (tnlab;1975;unpublished)
Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This lesson simulates transient analysis of RLC networks. The student chooses the variables for the system to be analyzed. Detailed instructions are provided.
none;none;undergraduate electrical engineering students

SERIES/PARALLEL NETWORKS (spdecomp;1975;unpublished)
Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This introductory network analysis lesson provides a drill in the analysis of series/parallel resistor networks.
none;22 minutes;undergraduate electrical engineering students

VOLTAGE AND CURRENT SOURCE (visource;1975;unpublished)
Weston, Paul; Kesler, Paula
Dept. of Electrical Engineering, Univ. of Illinois
This is a brief exposition, in practice form, of some properties of the ideal sources. The student controls the voltage, PLATO controls the resistance value, and the object is to keep the current at .04 amps while parameters change.
none;9 minutes;undergraduate electrical engineering students

VOLTAGE DIVISION IN SERIES/PARALLEL NETWORKS (vidiv;1975;unpublished)
Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This lesson presents voltage and current problems dealing with voltage division, network reduction and nested voltage division. At least one problem must be done to complete the exercise.
none;10 minutes;undergraduate electrical engineering students

Networks

Electric

CONVENTIONAL CURRENT (elenan3;1975;unpublished)
Weston, Paul; Yen, Bob
Dept. of Electrical Engineering, Univ. of Illinois
This introductory exercise on network analysis presents a simple illustration of current as the net flow of positive charge.
none;5 minutes;undergraduate students of electrical engineering

KIRCHHOFF'S VOLTAGE AND CURRENT LAWS FOR IDEAL SOURCES I (kfpbl;1976;1977)
Fries, Keith L
Dept. Elec. Engin., University of Illinois
This is a drill lesson, asking the student to solve a network involving ideal voltages and current sources.
none;30 minutes;college/ university

KIRCHHOFF'S VOLTAGE AND CURRENT LAWS FOR IDEAL SOURCES II (kvcldemo;1977;1979)
Fries, Keith L
Electrical Engineering Dept., Univ. of Illinois
This program is the drill lesson on Kirchhoff's voltage and current laws which has a user-editable capability for the networks to be studied. Students may input element values for each of ten networks provided, or instructors may design networks suitable for their own purposes in lieu of using the available networks.
none;open-ended;college/university

THE RESISTOR (resistor;1975;unpublished)
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Dept. of Electrical Engineering, Univ. of Illinois
This exercise provides drill material on Ohm's law and the resistor.
none;26 minutes;undergraduate electrical engineering students

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Dept. of Electrical Engineering, Univ. of Illinois
This exercise provides the student with practice using single time-constant RL and RC networks with step sources. Help is available as well as descriptions of the various parameters.
none;none;undergraduate electrical engineering students

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Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This lesson simulates transient analysis of RLC networks. The student chooses the variables for the system to be analyzed. Detailed instructions are provided.
none;none;undergraduate electrical engineering students

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This lesson presents voltage and current problems dealing with voltage division, network reduction and nested voltage division. At least one problem must be done to complete the exercise.
none;10 minutes;undergraduate electrical engineering students

Neuroanatomy

CRANIAL NERVE REVIEW AND DRILL (curtiss17;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine of the Univ. of Illinois
This lesson provides a review of cranial nerve functions via tables and drills.
none;15 minutes;students of occupational therapy

Neurofibrils

ACTION POTENTIALS OF SINGLE NERVE FIBERS (actpot;1976;unpublished)
Woods, James; Giles, Steven; Cohen, Paul
Oklahoma University Health Sciences Center
This lesson reviews some basic topics on the physiology of neurons and considers the theoretical background of action potentials in single nerve fibers.
none;15 minutes;first year medical students

Neurology

BIG CITY NEUROLOGIST AND MRS. CRIBBLECROBBLES (curtiss19;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson presents a case study review of the findings of a classical brain tumor syndrome.
none;10-20 minutes;students of occupational therapy, medical students

MR. Q'S DILEMMA, OR DIFFERENT STROKES FOR DIFFERENT FOLKS (strokes;1977;unpublished)
Curtis, Brian A; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson in clinical neurology touches on cerebrovascular accidents and the expected course, upper and lower motor neuron lesions, and spinal cord lesions.
touch panel;45-60 minutes;occup. therapy and med. students

MYSTERIOUS SPINAL CD. CASE III:NEUROGENIC BLAD. (curtiss14;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the bladder emptying reflex, and differentiation between the flaccid and spastic neurogenic bladder.
none;5-10 minutes;students of occupational therapy, medical students

MYSTERIOUS SPINAL CD. CASE II: THE BROWN SEQUARD SYNDROME (curtiss13;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson is a simulated case study of the expected findings in the Brown-Sequard Syndrome correlated with the functional neuroanatomical findings. If certain key questions are missed, remedial information is provided.
optional touch panel;5-15 minutes;occup. therapy and med. students

MYSTERIOUS SPINAL CD. CASE IV: ANTER. SPINAL ART. OCCLUSION
(curtiss15;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides review of the expected clinical findings of the anterior spinal artery occlusion syndrome, correlated with expected neuroanatomical defects.
none;5-10 minutes;students of occupational therapy, medical students

MYSTERIOUS SPINAL CD. CASE I: THE TUMOR AND MRS. X (curtiss12;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the functional neuroanatomy of selected spinal cord tracts, deep tendon reflexes, and reflex arcs, with remedial instruction made available when key questions are missed. Also covered is the level localization of a spinal cord lesion.
optional touch panel;10-15 minutes;occup. therapy and med. students

NEUROSTAKES: COMPETITIVE QUIZ IN NEUROLOGY AND NEUROANATOMY
(curtiss22;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson contains a quiz over neurological and neuroanatomical materials covered in the PLATO neurology lessons. There are two sections, each with five questions in each of five categories. Thirty seconds are allowed for answering a question and points are subtracted for wrong answers.
none;10-15 minutes;students of occupational therapy, medical students

SPINAL NERVE LESION (curtiss10;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a simulated case of a spinal nerve lesion with remedial information available when certain key questions are missed.
none;10-20 minutes;students of occupational therapy, medical students

STROKE SYNDROME CASE STUDY I (curtiss18;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson presents a case study reviewing the classic findings of a relatively common stroke syndrome.
optional touch panel;10-20 minutes;occup. therapy and med. students

STROKE SYNDROME CASE STUDY II (curtiss21;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson presents a case study review of a very common stroke syndrome of the elderly.
none;5-10 minutes;students of occupational therapy, medical students

THE UNANSWERABLE WORD-LANGUAGE DYSFUNCTION (curtiss20;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson presents common patterns of language dysfunction secondary to organic brain damage, and a brief discussion of dysarthria.
optional touch panel;10-20 minutes;occup. therapy and med. students

Neurology--Examinations, questions, etc.

MYSTERIOUS SPINAL CD. CASE II: THE BROWN SEQUARD SYNDROME (curtiss13;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson is a simulated case study of the expected findings in the Brown-Sequard Syndrome correlated with the functional neuroanatomical findings. If certain key questions are missed, remedial information is provided.
optional touch panel;5-15 minutes;occup. therapy and med. students

MYSTERIOUS SPINAL CD. CASE I: THE TUMOR AND MRS. X (curtiss12;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the functional neuroanatomy of selected spinal cord tracts, deep tendon reflexes, and reflex arcs, with remedial instruction made available when key questions are missed. Also covered is the level localization of a spinal cord lesion.
optional touch panel;10-15 minutes;occup. therapy and med. students

NEUROSTAKES: COMPETITIVE QUIZ IN NEUROLOGY AND NEUROANATOMY (curtiss22;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson contains a quiz over neurological and neuroanatomical materials covered in the PLATO neurology lessons. There are two sections, each with five questions in each of five categories. Thirty seconds are allowed for answering a question and points are subtracted for wrong answers.
none;10-15 minutes;students of occupational therapy, medical students

SPINAL NERVE LESION (curtiss10;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a simulated case of a spinal nerve lesion with remedial information available when certain key questions are missed.
none;10-20 minutes;students of occupational therapy, medical students

Neurons

ACTION POTENTIALS OF SINGLE NERVE FIBERS (actpot;1976;unpublished)
Woods, James; Giles, Steven; Cohen, Paul
Oklahoma University Health Sciences Center
This lesson reviews some basic topics on the physiology of neurons and considers the theoretical background of action potentials in single nerve fibers.
none;15 minutes;first year medical students

Neuropharmacology

AUTONOMIC PHARMACOLOGY I: GENERAL INTRODUCTION AND REVIEW (kumc3;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Felty, Michael; et al.
University of Kansas / University of Illinois
This lesson discusses general concepts of the autonomic nervous system including synthesis, degradation and effects of the various neurotransmitters. Questions to review the material are included.
none;15 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: ADRENERGIC AGENTS (autotut;1975;unpublished)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson covers various noradrenergic synaptic processes, including norepinephrine synthesis, granular storage, terminal release and re-uptake, catabolism and receptor interaction. The sequence of questions/information is dependent on student performance. Clinically pertinent information is used to reinforce concepts.
none;30 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: ARTERIAL BLOOD PRESSURE IN THE DOG (kumc12;1975;unpublished)
Kansas University Medical Center; Hody, George; Stull, Richard; et al.
University of Kansas / University of Illinois
This lesson is a brief graphic quiz over various autonomic receptor agonists and antagonists, and their effects on certain cardiovascular parameters in the laboratory.
none;5 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: REVIEW (kumc18;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson is a quiz covering adrenergic and cholinergic related compounds, including stimulants and blocking agents. The questions are oriented toward basic mechanisms of these blocking agents, but draw clinical correlates as well.
none;15 minutes;first year medical students

AUTON. PHARMACOL. II: SYNTH. & BIOTRANSF. OF NEUROTRANS.
(kumc4;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson treats the synthesis and degradation of mediators of the autonomic nervous system, including the common synthetic pathway of epinephrine and acetylcholine.
none;10 minutes;first year medical students

AUTON. PHARMACOL.: ADRENERGIC MECHANISMS AND USES (kumc13;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson treats the effects of adrenergic stimulating and blocking agents. The concept of alpha and beta adrenergic receptors is included.
none;10 minutes;first year medical students

AUTON. PHARMACOL.: CHOLINERGIC MECHANISMS & USES (kumc9;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the effects of stimulation and blockade of muscarinic and nicotinic receptors.
none;25 minutes;first year medical students

CNS PHARMACOLOGY: ANALGESIA REVIEW (kumc32;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses morphine-type analgesic agents.
none;15 minutes;first year medical students

CNS PHARMACOLOGY: ANESTHESIA CASE STUDY (kumc38;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents questions based upon a case history regarding general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: ANESTHESIA QUIZ (kumc30;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson is a quiz on basic principles of general anesthesia and clinically pertinent gaseous anesthetic agents.
none;15 minutes;first year medical students

CNS PHARMACOLOGY: ANTICONVULSANT QUIZ (kumc20;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Woods, James; et al.
University of Kansas / University of Illinois
This lesson is a quiz on clinically pertinent anticonvulsant agents.
none;15 minutes;first year medical students

CNS PHARMACOLOGY: ANTIDEPRESSANT QUIZ (kumc21;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson is a quiz over general principles of depression and clinically pertinent antidepressant agents.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: GENERAL ANESTHESIA (kumc29;1975;unpublished)
Kansas University Medical Center; Nelson, S; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson covers the general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: SEDATIVES AND HYPNOTICS (kumc19;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the general chemistry and pharmacology of sedative-hypnotics. Those treated are primarily barbiturates, certain anithistamines, chloral hydrate, ethchlorvynol, glutethamide, methaqualone and other clinically pertinent sedative-hypnotic agents.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: STIMULANTS AND HALLUCINOGENS (kumc22;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents material on hallucinogenic agents and central nervous system stimulants.
none;10 minutes;first year medical students

CNS PHARM.: ASPIRIN-TYPE ANALGESICS & ANTI-INFLAM. AGENTS (kumc28;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the analgesic and anti-inflammatory effects of salicylates and other aspirin-type agents.
none;20 minutes;first year medical students

GLAUCOMA (bazzoon;1978;unpublished)
Farney, Thomas L; Lee, Tom Jer-Fu
Southern Illinois University School of Medicine
This lesson consists of eleven sections which allow the student to learn about the anatomy and physiology of glaucoma, selectively review aspects of the disease process, and assess his/her knowledge of relevant autonomic pharmacology.
none;open-ended;first year medical students

LAB. EXPT. IN THE PHARMACOLOGY OF THE AUTO. NERVOUS SYSTEM
(labsim;1975;1977)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois

The student is shown the effects of certain autonomic agents on several aspects of the cardiovascular system in the "anesthetized laboratory dog".

After making the observations, an opportunity is given to apply the information by identifying a unknown compound.

none;25 minutes;medical students

NEUROHUMOR METABOLISM: METAB. PATHS OF PRIMARY NEUROMEDIATOR
(nhumor;1975;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois

The lesson provides information regarding the synthesis and degradation of certain primary chemical mediators of the autonomic and central nervous systems, including dopamine, norepinephrine, epinephrine, serotonin, and acetylcholine. A drill and practice section over various structures and pathways is included.

none;25 minutes;first year medical students

Neurophysiology

ACTION POTENTIALS OF SINGLE NERVE FIBERS (actpot;1976;unpublished)
Woods, James; Giles, Steven; Cohen, Paul
Oklahoma University Health Sciences Center

This lesson reviews some basic topics on the physiology of neurons and considers the theoretical background of action potentials in single nerve fibers.

none;15 minutes;first year medical students

NEUROPHYSIOLOGY LABORATORY (actpot2;1977;unpublished)
Woods, James; Lawrance, David P; McCraw, Gordon W; et al.
University of Oklahoma / University of Illinois

This lesson is designed for the student of electrophysiology. A simulation of typical electrophysiologic laboratory procedures and concepts such as graded stimuli, spatial summation and temporal summation are presented.

none;open-ended;first year medical or graduate students

NEUROPHYSIOLOGY REVIEW (kumc39;1975;unpublished)
Felty, Michael; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois

This lesson provides a review and test for the materials covered in PLATO neurophysiology lessons.

none;open-ended;first year medical students

SKELETAL MUSCLE PHYSIOLOGY, PART I (averager;1978;unpublished)
Schooley, Ralph E; Denault, John M; Collins, Thomas J
Department of Biophysics, University of Illinois
This lesson is designed to introduce the student to the fundamentals of skeletal muscle physiology at the molecular level and to acquaint the student with the response of skeletal muscle stimulation.
none;none;first year medical students

SKELETAL MUSCLE PHYSIOLOGY, PART II (neuron2;1978;unpublished)
Schooley, Ralph E; Cooper, Kim; Collins, Thomas J
School of Basic Medical Sciences, Univ. of Illinois
This lesson is designed to acquaint the student with the response of skeletal muscle to stimulation. Emphasis is placed on isometric and isotonic contractions and relation between stimulus and response. Tension-length curves, force-velocity curves and power-load curves are discussed.
none;45 minutes;first year medical students

SKELETAL MUSCLE PHYSIOLOGY - COMPREHENSIVE QUIZ (ral;1978;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois
This lesson is designed to quiz the student over the fundamentals of skeletal muscle physiology at the molecular level as well as over the response of skeletal muscle to external stimulation.
none;30 minutes;first year medical students

Neurophysiology--Examinations, questions, etc.

NEUROPHYSIOLOGY REVIEW (kumc39;1975;unpublished)
Felty, Michael; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois
This lesson provides a review and test for the materials covered in PLATO neurophysiology lessons.
none;open-ended;first year medical students

SKELETAL MUSCLE PHYSIOLOGY - COMPREHENSIVE QUIZ (ral;1978;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois
This lesson is designed to quiz the student over the fundamentals of skeletal muscle physiology at the molecular level as well as over the response of skeletal muscle to external stimulation.
none;30 minutes;first year medical students

Neuroses

AFFECTIVE ILLNESS AND THEIR CAUSES AND TREATMENT (nursing19;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
This lesson discusses various aspects of affective illnesses and their causes and treatment. The method used in this lesson is the presentation of material followed by one or more questions.
none;none;nursing students

NEUROSIS AND THE TREATMENT OF NEUROSIS (nursing8;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
The goal of this lesson is to understand neurosis and the methods of treating it. The method used is the presentation of materials followed by one or more questions on the material.
none;30-45 minutes;nursing students

Nitrous oxide

CNS PHARMACOLOGY: GENERAL ANESTHESIA (kumc29;1975;unpublished)
Kansas University Medical Center; Nelson, S; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson covers the general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

Nomenclature

General chemistry

CHEMICAL NOMENCLATURE - COMPOUNDS WITH MULTIVALENT CATIONS (chemnom4;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
The final lesson in the series on Chemical Nomenclature is on naming compounds with multivalent cations. This lesson like the others contains practice problems.
none;none;college/university students

CHEMICAL NOMENCLATURE - NAMING ACIDS AND BASES (chemnom3;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
This is the second lesson in the series of lessons on Chemical Nomenclature. This lesson involves naming acids and bases.
none;none;college/university students

CHEMICAL NOMENCLATURE - NAMING IONS AND SALTS (chemnom2;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
This is the first in the series of separate lessons on Chemical Nomenclature. This lesson involves the naming of cations, anions, polyatomic ions and salts.
none;none;college/university students

ELEMENTS GAME (elements;1974;1977)
Smith S - Chabay R
Chemistry Department, University of Illinois
This is an interterminal game. It is played between two players each at a different terminal. The players compete to see who can correctly provide the names or symbols of more of the elements.
none;open-ended;students in introductory chemistry

INORGANIC NOMENCLATURE (chemnom;1977;1978)
Moore, Carolynn
Chemistry Department, University of Illinois
The lesson gives instruction in how to name some chemical compounds (ions, salts, acids, and multivalent cations). Practice drills are included. All the material is in one lesson. Similar material by the same author is divided into three lessons which are described separately.
none;39 minutes;college/university students of beginning chemistry

INORGANIC NOMENCLATURE DRILLS (compound;1973;1977)
Grandey, Robert C; Adams, Edward
Computer-based Educ. Res. Lab., University of Illinois
The lesson allows the student to do drills on names and formulas of salts, acids and bases (binary non-metallic compounds). The drills may be designed by instructors, may be standard drills, or may be made up by the student.
none;none;college/university chemistry students

NAMES OF SOME INORGANIC COMPOUNDS (inom2;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson is an introduction to the names and symbols of some common inorganic compounds. It includes names of some inorganic ions, and names and formulas for acids, oxides, some salts and bases.
none;27 minutes;college/university freshmen

Organic chemistry

EMPIRICAL FORMULAS AND PERCENT COMPOSITION (organal;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson deals with the determination of the percent composition of carbon and hydrogen in organic compounds and the determination of the empirical formulas of the compound from typical percent composition data.
none;none;college/university students

INTRODUCTION TO NAMES OF ORGANIC COMPOUNDS (nomc;1972;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson provides an introduction to the nomenclature system of organic chemists by discussing the names of some common organic compounds, specifically the alkanes and alkyl halides.
none;44 minutes;college/university students

INTRODUCTION TO OPTICAL ACTIVITY (chiral;1974;unpublished)
Smith, Stanley
Chemistry Department, University of Illinois
As an introduction to the subject of optical activity of organic molecules, 3-D representations of some organic molecules and their mirror images are graphically presented. The recognition of chiral molecules, the measurement of the rotation of 2-butanol and the subject of optical purity is also discussed and illustrated.
none;59 minutes;college/university students

NAMES AND STRUCTURES OF COMMON FUNCTIONAL GROUPS (fgroup;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson provides the structures of some common functional groups and practice in recognizing them in typical organic compounds.
none;42 minutes;college/university students

STRUCTURE AND CONFORMATION OF CYCLOALKANES (cyclo;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson deals with nomenclature and conformations of some common cycloalkanes. It includes three dimensional representation of molecules, conformation of ethane, propane and butane, energy barriers to rotations about single bonds and Newman projection formulas.
none;24 minutes;college/university students

Notesfiles (PLATO)

PLATO NOTEFILE DRIVER (pmrnotes;1978;unpublished)
Resch, Paul
Comp.-based Educ. Res. Lab., Univ. of Illinois
The program is a -use-able notefile driver. It is about as efficient as the system "group notes". It has a slightly different method of storage, so uses fewer words and allows more notes to be stored. The user must provide his own dataset or nameset. The driver resides in a normal TUTOR file. Both background and foreground options are available.
none;open-ended;any PLATO user

Nouns

see English language--Grammar

Nuclear magnetic resonance spectroscopy

NUCLEAR MAGNETIC RESONANCE (NMR) (SHORT VERSION) (nmr3short;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is a shortened version of "nmr3". The lesson presents a review of the principles underlying the interpretation of NMR spectra, allows the student to work through sample problems and presents one set of problems in which the organic compounds are to be identified from their empirical formulas and their NMR spectra.
none;52 minutes;college/university students

NUCLEAR MAGNETIC RESONANCE (NMR): PART 1 (nmr1;1972;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson discusses NMR signals from protons, the recognition of types of protons in organic compounds, chemical shift and chemical shift scales.
none;29 minutes;college/university students

NUCLEAR MAGNETIC RESONANCE (NMR): PART 2 (nmr2;1972;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.
This lesson on nuclear magnetic resonance deals with proton spin-spin coupling and the n+1 rule. It allows the student to calculate AB and AB 2 spectra from J and values of the chemical shift.
microfiche;35 minutes;college and university chemistry students

NUCLEAR MAGNETIC RESONANCE (NMR): PART 3 (nmr3;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson presents a review of the principles underlying the interpretation of NMR spectra, allows the student to work through sample problems and presents three sets of problems in which the organic compounds are to be identified from their empirical formulas and their NMR spectra. The lesson requires a microfiche.
microfiche;102 minutes;college/university students

Nuclear physics--Problems, exercises, etc.

ALPHA AND BETA DECAY AND Q (ENERGY) OF REACTION (cb6;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois
The lesson contains exercises for the student in which a nucleus is selected and from the nuclear mass data a determination can be made as to whether the nucleus can alpha-decay or beta-decay. The energy (Q) of the reaction can also be found.
none;none;students of elementary modern physics

NUCLEAR DECAY PROCESSES (decay;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois

The program is one which by means of animated graphics allows the student to study nuclear decay processes.The determination of the half-life of processes is an end result.

none;none;students of elementary modern physics

Nuclear spin

NUCLEAR MAGNETIC RESONANCE (NMR): PART 2 (nmr2;1972;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.

This lesson on nuclear magnetic resonance deals with proton spin-spin coupling and the n+1 rule. It allows the student to calculate AB and AB 2 spectra from J and values of the chemical shift.

microfiche;35 minutes;college and university chemistry students

Nucleic acid metabolism

PURINE METABOLISM (goutl;1977;unpublished)
Ahasic, Thomas; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois

This lesson provides a discussion of purine synthesis and catabolism with particular emphasis on processes which are of immediate concern for the understanding of various disease states and the mechanism of effect of certain pharmacologic agents.

none;30 minutes;first year medical students

Nucleic acid synthesis

BIOSYNTHESIS OF PROTEIN (shp8;1974;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas

This lesson will describe the main sequence of events leading to the synthesis of nucleic acids and protein in the cell, identify the roles played by the nucleic acids in the biosynthesis of protein, and predict the effect of point mutations on protein primary structure.

none;60 minutes;physicians' assistants

PURINE METABOLISM (goutl;1977;unpublished)
Ahasic, Thomas; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois

This lesson provides a discussion of purine synthesis and catabolism with particular emphasis on processes which are of immediate concern for the understanding of various disease states and the mechanism of effect of certain pharmacologic agents.

none;30 minutes;first year medical students

Nucleic acids

NUCLEIC ACID SEQUENCES (mnuc2;1977;unpublished)

Ahasic, Thomas

School of Basic Medical Sciences, Univ. of Illinois

This lesson presents the nomenclature, properties and structures of nucleotide sequences and the reactions by which they can be degraded. The lesson is divided into instructional sections each followed by questions on the objectives covered in that section.

none;none;first year medical students

NUCLEIC ACIDS II: IDENTIFICATION OF NUCLEIC ACIDS (mnucqz;1975;unpublished)

Agee, C. Coe; Ahasic, Thomas

School of Basic Medical Sciences, Univ. of Illinois

This lesson is a multiple choice proficiency drill covering the structure and nomenclature of nucleic acids, nucleotide sequences and nucleic acid derivatives.

none;15 minutes;first year medical students

NUCLEIC ACIDS I: STRUCTURES AND BIOCHEMICAL CHARACTERISTICS (mnuc;1976;unpublished)

Ahasic, Thomas; Agee, C. Coe

School of Basic Medical Sciences, Univ. of Illinois

This lesson presents the nomenclature, properties, structures and uses of the common "bases," nucleosides and nucleotides. Some purine and pyrimidine derivatives with therapeutic uses are also covered. This material is divided into four instructional sections each followed by a set of informative questions.

none;30 minutes;first year medical students

Nucleosides

NUCLEIC ACIDS I: STRUCTURES AND BIOCHEMICAL CHARACTERISTICS (mnuc;1976;unpublished)

Ahasic, Thomas; Agee, C. Coe

School of Basic Medical Sciences, Univ. of Illinois

This lesson presents the nomenclature, properties, structures and uses of the common "bases," nucleosides and nucleotides. Some purine and pyrimidine derivatives with therapeutic uses are also covered. This material is divided into four instructional sections each followed by a set of informative questions.

none;30 minutes;first year medical students

Nucleotides

NUCLEIC ACID SEQUENCES (mnuc2;1977;unpublished)

Ahasic, Thomas

School of Basic Medical Sciences, Univ. of Illinois

This lesson presents the nomenclature, properties and structures of nucleotide sequences and the reactions by which they can be degraded. The lesson is divided into instructional sections each followed by questions on the objectives covered in that section.

none;none;first year medical students

NUCLEIC ACIDS II: IDENTIFICATION OF NUCLEIC ACIDS (mnucqz;1975;unpublished)
Agee, C. Coe; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson is a multiple choice proficiency drill covering the structure and nomenclature of nucleic acids, nucleotide sequences and nucleic acid derivatives.
none;15 minutes;first year medical students

NUCLEIC ACIDS I: STRUCTURES AND BIOCHEMICAL CHARACTERISTICS (mnuc;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents the nomenclature, properties, structures and uses of the common "bases," nucleosides and nucleotides. Some purine and pyrimidine derivatives with therapeutic uses are also covered. This material is divided into four instructional sections each followed by a set of informative questions.
none;30 minutes;first year medical students

PURINE METABOLISM (goutl;1977;unpublished)
Ahasic, Thomas; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides a discussion of purine synthesis and catabolism with particular emphasis on processes which are of immediate concern for the understanding of various disease states and the mechanism of effect of certain pharmacologic agents.
none;30 minutes;first year medical students

SANGER OLIGONUCLEOTIDE MAPPING (saml;1976;1978)
Kaplan, Samuel
Department of Microbiology, University of Illinois
The lesson teaches the student the techniques of Sanger oligonucleotide mapping through a simulated laboratory exercise. The lesson is not intended to substitute for a wet laboratory experience. The exercise is self-paced."saml" takes up digestion of RNA chains, "sam2" lforesis oligos, "sam3" questions on digestion, "sam4" chain generation.
none;2 1/2-3 hours total;college/university students

Numbers

Complex

MINI-CALCULATOR (calca;1975;1978)
Bennett, Carol D
Physics Department, University of Illinois
The program is a utility program providing a small calculator without user-defined functions; it includes real or complex numbers, random numbers, and array operations.
none;open-ended;students in mathematics, physics, and other sciences

Random

MINI-CALCULATOR (calca;1975;1978)
Bennett, Carol D
Physics Department, University of Illinois
The program is a utility program providing a small calculator without user-defined functions; it includes real or complex numbers, random numbers, and array operations.
none;open-ended;students in mathematics, physics, and other sciences

Numbers, Real

GUESS MY NUMBER (zguess;1972;1978)
Steinberg, Esther R
Computer-based Educ. Res. Lab., Univ. of Ill.
This is a lesson about number concepts and the number line. Both integers and decimals are considered.
none;none;intermediate level elementary students

Numerical analysis

Curve fitting

CLOSEUP (closeup;1976;1977)
Schreiner, Axel T
Mathematics Department, University of Illinois
This is a program for the simulation of various approximation methods and provides a general plotting capability for functions and straight lines.
none;open-ended;college/university students

COMPUTE (compute;1976;1979)
Fries, Keith L
Dept. of Electrical Engineering, Univ. of Illinois
This program is a service utility designed to provide the user with convenient, user-oriented calculating routines for real valued systems. Help sequences are available throughout the lesson.
none;open-ended;university/college students

COMPUTE HELP (comphelp;1977;1979)
Fries, Keith L
Dept. of Electrical Engineering, U of I, Urbana, Ill.
This is a short lesson describing the techniques that can be used for solving equations; there is also information on how to use them with the 'compute' series of lessons.
none;none;college/university students

DATA ANALYSIS (chel3;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on the analysis of data, which are nothing more than a related group of numbers. This data can be useless as a raw numerical set, but by interpretation or restructuring it can be put in a more compact and readable form. In this lesson the user will be shown methods by which data analysis can be accomplished easily and efficiently.

none;23 minutes;sophomore students of chemical engineering

NUMERICAL ANALYSIS UTILITY (calc;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

This is a utility program to aid in numerical analysis. The program provides an elaborate calculator and x-y function plotter with user-defined functions A-Z and variables a-z.

none;open-ended;students of mathematics and physics

Nurse and patient

PEDIATRIC PHARMACOLOGY FOR NURSES (pedspharm;1976;unpublished)
Pugh, Elizabeth J
School of Nursing, University of Illinois

A self-study unit for nurses administering medications to children. This program is designed to be used as a bridge between past knowledge and that which will be necessary for safe practice with children.

none;none;junior level nursing students

POST OPERATIVE NURSING CARE (postop;1978;1978)
Kirchhoff, Karen
School of Nursing, Univ. of Ill. Med. Ctr., Chicago

The lesson teaches the basis for planning nursing care for a postoperative patient. The focus is on the nursing care of patients who have had general surgery and a normal post-operative recovery. The "time period" is the immediate post-operative phase after transfer from the Recovery Room. General intervention and evaluation criteria are stressed.

none;none;professional nursing students

Nurses and nursing

Maternal health services

INFLUENCE OF HORMONES ON REPRODUCTION (reprod;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland Col., Champaign, Illinois

This lesson is a part of the series on the process of reproduction designed for nursing students studying maternity nursing. This lesson illustrates the influence of hormones on the process. Charts are used, help sections and a dictionary of terms are available to the students.

none;20 minutes;students of maternity nursing

MATERNAL-CHILD NURSING COURSE, INTRODUCTION AND QUIZZES (mnurse1;1975;1978)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This introductory lesson briefly discusses maternal and child health nursing, and offers quizzes on vocabulary that the student should know before beginning the "Maternal-Child Nursing Course."
none;open-ended;nursing students

MATERNAL-CHILD NURSING COURSE, QUIZZES FOR PRENATAL LESSONS (mnurse11;1975;1979)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
The student of Maternal and Child Nursing should be familiar with terms found in the vocabulary quizzes in this lesson. Each quiz contains 25 terms which are used or introduced in the lessons indicated.
none;none;nursing students

OBSTETRICAL ANATOMY PART I (mnurse3;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson is concerned with the culmination of pregnancy: labor, the series of processes by which the infant and accessory parts are expelled from the mother's body, and delivery, the actual expulsion of the infant.
none;none;nursing students

OBSTETRICAL ANATOMY PART II (mnurse4;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson continues the discussion begun in "Obstetrical Anatomy Part I" with information about the presentation, position and degree of descent, which is necessary to evaluate the progress of labor.
none;none;nursing students

PHYSIOLOGY OF FEMALE REPRODUCTIVE CYCLE (mnurse8;1975;1978)
Bitzer, Maryann; Boudreaux, Martha; Bitzer, Donald
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson is concerned with the physiology of the female reproductive cycle. The physiological changes which occur during the non-pregnant and pregnant states are discussed, and information concerning hormones being secreted is provided. A set of questions will check the student's understanding of the material.
none;none;nursing students

PLACENTAL TRANSFER AND FETAL PHARMACOLOGY (mnurse7;1975;1978)
Bitzer, Maryann; Boudreaux, Martha; Bitzer, Donald
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson illustrates the importance of placental transfer of drugs and disease from mother to fetus, and gives an overview of some present day findings.
none;none;nursing students

POSTPARTUM (postpartum;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland Col., Champaign, Ill.
The lesson on postpartum nursing instructs the nursing student in the technique of checking a postpartum mother, comparing her condition to normal expectations in several areas and determining whether any problems exist and what the proper care for the problems might be.
touch panel;30-45 minutes;students of maternity nursing

REPRODUCTIVE ANATOMY REVIEW (pelvis;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Division, Parkland Col., Champaign, Ill.
This lesson offers a review drill on reproductive anatomy with particular application for Maternity Nursing. The review encompasses the soft parts of the pelvic region, both male and female. The drill requires a microfiche.
slide selector, microfiche;30 minutes;students of nursing

REVIEW OF ANATOMY OF FEMALE REPRODUCTIVE SYSTEM (mnurse2;1975;1978)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson is a brief review of the anatomy of the female reproductive organs. Other organs or structures which are involved in pregnancy either through close proximity or functional relationship are also included.
none;none;nursing students

Obstetrical nursing

APGAR SCORING OF INFANTS (apgar;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This lesson teaches the use of the Apgar Scoring System which is one of the four general methods used to assist in the neonatal assessment process. The Apgar system offers a way to determine the physical status of the infant at birth. It appraises the cardiopulmonary functions.
none;15-20 minutes;nursing students

COMPLICATED LABOR STUDY 1 (conceal;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This lesson is concerned with the hemorrhagic condition of the antepartum period. This case study contains a brief prenatal history, a description of the mother's progress during labor, and a nurse's assessment of the mother's condition.
microfiche;30-45 minutes;nursing students

FETAL HEART RATE MONITORING (monor;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This lesson familiarizes the student or registered nurse with the completely automatic fetal monitoring system to be used for fetal heart rate and uterine contraction monitoring.
helpful to have audio-cassette;30-45 minutes;RN's and nursing students

FLUIDS AND ELECTROLYTE BALANCE IN THE NEONATE (fluids;1978;unpublished)
Buchholz, Linda M
University of Wisconsin, Madison, Wisconsin
This lesson is designed to acquaint neonatal intensive care personnel with the basic principles involved in fluid and major electrolyte balance of the neonate.
touch panel;none;nursing students

LABOR CASE STUDY -- MULTIGRAVIDA (mcase;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Sciences Div., Parkland College, Champaign, Ill.
This case study of a multigravida labor patient treats both the physical and emotional aspects of labor and delivery.
microfiche;30-45 minutes;nursing students

LABOR CASE STUDY -- PRIMAGRAVIDA (pcase;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This case study of a primigravida labor patient treats both the physical and emotional aspects of labor and delivery.
microfiche;50-60 minutes;nursing students

LAMAZE CHILDBIRTH PREPARATION (lamaze;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This lesson on the Lamaze method contains a description of the phases of labor, description and explanation of the Lamaze technique for phases of labor, description and explanation of the Lamaze techinique for delivery and a simulated case history.
none;20 minutes;nursing students

MATERNAL-CHILD NURSING COURSE, INTRODUCTION AND QUIZZES (mnurse1;1975;1978)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This introductory lesson briefly discusses maternal and child health nursing, and offers quizzes on vocabulary that the student should know before beginning the "Maternal-Child Nursing Course."
none;open-ended;nursing students

MATERNAL-CHILD NURSING COURSE, QUIZZES FOR PRENATAL LESSONS (mnurse11;1975;1979)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
The student of Maternal and Child Nursing should be familiar with terms found in the vocabulary quizzes in this lesson. Each quiz contains 25 terms which are used or introduced in the lessons indicated.
none;none;nursing students

MECHANISM OF LABOR (mnurse5;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson is concerned with a normal delivery and emphasizes the mechanism of labor - the progressive movements of the fetus through the pelvic passage.
none;none;nursing students

MEDICATIONS FOR USE IN OBSTETRICS (delivery;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
The lesson covers the dosages, action, nursing responsibilities and side effects of various medications used in the nursing of mothers. Seven patient situations which require drug intervention are given the student, and the use of the appropriate drug therapy for each situation may be investigated.
none;50-60 minutes;nursing students

OBSTETRICAL ANATOMY PART I (mnurse3;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson is concerned with the culmination of pregnancy: labor, the series of processes by which the infant and accessory parts are expelled from the mother's body, and delivery, the actual expulsion of the infant.
none;none;nursing students

OBSTETRICAL ANATOMY PART II (mnurse4;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson continues the discussion begun in "Obstetrical Anatomy Part I" with information about the presentation, position and degree of descent, which is necessary to evaluate the progress of labor.
none;none;nursing students

PHENOMENA OF LABOR PROCESS (labpro;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
The general objective of this lesson is to investigate the various methods of assessing progress in labor and delivery and to define the terms used in describing the status of labor of a patient.
microfiche;60-90 minutes;nursing students

Pediatric nursing

PEDIATRIC PHARMACOLOGY FOR NURSES (pedspharm;1976;unpublished)
Pugh, Elizabeth J
School of Nursing, University of Illinois
A self-study unit for nurses administering medications to children. This program is designed to be used as a bridge between past knowledge and that which will be necessary for safe practice with children.
none;none;junior level nursing students

Nurses and nursing

Postoperative care

POST OPERATIVE NURSING CARE (postop;1978;1978)
Kirchhoff, Karen
School of Nursing, Univ. of Ill. Med. Ctr., Chicago
The lesson teaches the basis for planning nursing care for a postoperative patient. The focus is on the nursing care of patients who have had general surgery and a normal postoperative recovery. The "time period" is the immediate postoperative phase after transfer from the Recovery Room. General intervention and evaluation criteria are stressed.
none;none;professional nursing students

Psychiatric nursing

AFFECTIVE ILLNESS AND THEIR CAUSES AND TREATMENT (nursing19;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
This lesson discusses various aspects of affective illnesses and their causes and treatment. The method used in this lesson is the presentation of material followed by one or more questions.
none;none;nursing students

ANXIOUS PATIENT: SIMULATED CARE PROGRAM (nursing15;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
This lesson is a patient care problem about an anxious patient. The goal of the lesson is to apply principles of intervention for an anxious patient. The format of the problem is an opening scene followed by a number of sections where you are required to make a decision about intervention, after which you will be informed of the consequences.
none;none;nursing students

THE DEPRESSED PATIENT: A SIMULATED PATIENT CARE PROBLEM 1 (nursing6;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. School, Chicago, Il.
This is a depressed patient care problem. The goal of the lesson is to apply principles of intervention for depressed patients. The format of the problem is an opening scene followed by a number of sections. In each section you are required to make a decision about intervention and you will be informed of the consequences of your action.
none;10-15 minutes;nursing students

THE DEPRESSED PATIENT: A SIMULATED PATIENT CARE PROBLEM 2 (nursing16;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. School, Chicago, Il.
This is a depressed patient care problem. The goal of the lesson is to apply principles of intervention for depressed patients. The format of the problem is an opening scene followed by a number of sections. In each section you are required to make a decision about intervention and you will be informed of the consequences of your action.
none;none;nursing students

NEUROSIS AND THE TREATMENT OF NEUROSIS (nursing8;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
The goal of this lesson is to understand neurosis and the methods of treating it. The method used is the presentation of materials followed by one or more questions on the material.
none;30-45 minutes;nursing students

MATERNAL-CHILD NURSING COURSE, INTRODUCTION AND QUIZZES (mnurse1;1975;1978)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This introductory lesson briefly discusses maternal and child health nursing, and offers quizzes on vocabulary that the student should know before beginning the "Maternal-Child Nursing Course."
none;open-ended;nursing students

MATERNAL-CHILD NURSING COURSE, QUIZZES FOR PRENATAL LESSONS (mnursell;1975;1979)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
The student of Maternal and Child Nursing should be familiar with terms found in the vocabulary quizzes in this lesson. Each quiz contains 25 terms which are used or introduced in the lessons indicated.
none;none;nursing students

PROBLEM-ORIENTED MEDICAL RECORDS (shp37;1974;unpublished)
Stutz, David R; Romanchek, James
Sheppard Air Force Base, Texas
This lesson teaches the student to record and organize the material in a medical chart according to the patient's problems.
none;20-30 minutes;physicians' assistants

WELCOME TO PLATO (nurseintro;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
The lesson is a short introduction to PLATO for nursing students. Included are instructions for signing on to a terminal, operating the PLATO keyset and touch panel, and using the various function keys such as NEXT, HELP, ERASE, DATA, etc.. A few added features of special use to nursing students, such as the "dictionary", are also described.
touch panel slide selector, microfiche;20 minutes;nursing students

Nurses and nursing--Problems, exercises, etc.

FLUIDS AND ELECTROLYTE BALANCE IN THE NEONATE (fluids;1978;unpublished)
Buchholz, Linda M
University of Wisconsin, Madison, Wisconsin
This lesson is designed to acquaint neonatal intensive care personnel with the basic principles involved in fluid and major electrolyte balance of the neonate.
touch panel;none;nursing students

MATERNAL-CHILD NURSING COURSE, INTRODUCTION AND QUIZZES (mnursel;1975;1978)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This introductory lesson briefly discusses maternal and child health nursing, and offers quizzes on vocabulary that the student should know before beginning the "Maternal-Child Nursing Course."
none;open-ended;nursing students

MATERNAL-CHILD NURSING COURSE, QUIZZES FOR PRENATAL LESSONS (mnursell;1975;1979)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
The student of Maternal and Child Nursing should be familiar with terms found in the vocabulary quizzes in this lesson. Each quiz contains 25 terms which are used or introduced in the lessons indicated.
none;none;nursing students

MATHEMATICS OF DRUGS AND SOLUTIONS (metapo;1975;1979)
Bitzer, Maryann; Lyman, Elisabeth R; McManus, Bonnie
Mercy Hospital School of Nursing, Urbana, Ill.
After completing the lessons in this unit, the student should be able to recognize the most commonly used units in the metric and apothecary systems of measurement, compute equivalent dosage of medication utilizing the metric and apothecary system of measurement and solve problems related to drugs and solution dosages.
none;none;nursing students

MCH SELF-ASSESSMENT (selfassess;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This is a Maternal Child Health self-assessment quiz for student nurses consisting of 44 questions. Questions may be skipped and returned to at a later time; the entire test may be reviewed by going through it forwards and backwards.
none;30-45 minutes;nursing students

Nutrition

CARBOHYDRATES (nutr3;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
The third lesson in the Nutrition Series presents material on the different carbohydrates, their utilization for energy, and food sources.
none;25-30 minutes;nutrition students

DIGESTIVE ORGANS AND THEIR FUNCTIONS (nutr2;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This second lesson in the Nutrition Series presents material about the chemical processes contributing to the breakdown and utilization of food.
none;25-30 minutes;nutrition students

ENERGY (nutr6;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
The sixth lesson in the Nutrition Series discusses the measurement and requirements of energy in relation to the body.
none;25-30 minutes;nutrition students

FAT-SOLUBLE VITAMINS (vitc;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson discusses the fat-soluble vitamins which are composed of only carbon, hydrogen and oxygen, and can be stored in the body.
none;25-30 minutes;nutrition students

LIPIDS (nutr4;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson, the fourth in the Nutrition Series, discusses the fats, oil and fatlike substances called lipids.
none;25-30 minutes;nutrition students

MACROMINERALS (macmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson presents information about macrominerals, or those minerals required in the human diet in amounts exceeding 100 mg. per day. The macrominerals are calcium, phosphorus, magnesium, potassium, sodium, sulphur and chlorine.
none;25-30 minutes;nutrition students

MICROMINERALS (minmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson discusses microminerals, or those elements that are required in the human diet in amounts less than 100 mg. per day. Iron, iodine and fluorine are three of the most important.
none;25-30 minutes;nutrition students

NUTRITION SERIES, GENERAL OVERVIEW (nutr1;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This is an introductory lesson in the a series of Nutrition lessons designed to provide some basic concepts in nutritional science. Digestive organs and functions, carbohydrates, lipids, proteins and energy will be discussed.
none;25-30 minutes;nutrition students

PROTEINS (nutr5;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
The fifth lesson in the Nutrition Series discusses proteins and their classification, digestion and absorption, and function in the body. Requirements and deficieny are also included.
none;25-30 minutes;nutrition students

WATER-SOLUBLE VITAMINS (vit2;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson discusses the vitamins not stored in the body. The requirements and functions of the water-soluble vitamins are presented, as well as food origins and methods of food preparation so as to best utilize and maintain the vitamin contents.
none;25-30 minutes;nutrition students

Obstetrical endocrinology

FLUIDS AND ELECTROLYTE BALANCE IN THE NEONATE (fluids;1978;unpublished)
Buchholz, Linda M
University of Wisconsin, Madison, Wisconsin
This lesson is designed to acquaint neonatal intensive care personnel with the basic principles involved in fluid and major electrolyte balance of the neonate.
touch panel;none;nursing students

Obstetrical nursing

APGAR SCORING OF INFANTS (apgar;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This lesson teaches the use of the Apgar Scoring System which is one of the four general methods used to assist in the neonatal assessment process. The Apgar system offers a way to determine the physical status of the infant at birth. It appraises the cardiopulmonary functions.
none;15-20 minutes;nursing students

COMPLICATED LABOR STUDY 1 (conceal;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This lesson is concerned with the hemorrhagic condition of the antepartum period. This case study contains a brief prenatal history, a description of the mother's progress during labor, and a nurse's assessment of the mother's condition.
microfiche;30-45 minutes;nursing students

FETAL HEART RATE MONITORING (monor;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This lesson familiarizes the student or registered nurse with the completely automatic fetal monitoring system to be used for fetal heart rate and uterine contraction monitoring.
helpful to have audio-cassette;30-45 minutes;RN's and nursing students

FLUIDS AND ELECTROLYTE BALANCE IN THE NEONATE (fluids;1978;unpublished)
Buchholz, Linda M
University of Wisconsin, Madison, Wisconsin
This lesson is designed to acquaint neonatal intensive care personnel with the basic principles involved in fluid and major electrolyte balance of the neonate.
touch panel;none;nursing students

LABOR CASE STUDY -- MULTIGRAVIDA (mcase;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Sciences Div., Parkland College, Champaign, Ill.
This case study of a multigravida labor patient treats both the physical and emotional aspects of labor and delivery.
microfiche;30-45 minutes;nursing students

LABOR CASE STUDY -- PRIMAGRAVIDA (pcase;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This case study of a primigravida labor patient treats both the physical and emotional aspects of labor and delivery.
microfiche;50-60 minutes;nursing students

LAMAZE CHILDBIRTH PREPARATION (lamaze;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
This lesson on the Lamaze method contains a description of the phases of labor, description and explanation of the Lamaze technique for phases of labor, description and explanation of the Lamaze techinique for delivery and a simulated case history.
none;20 minutes;nursing students

MATERNAL-CHILD NURSING COURSE, INTRODUCTION AND QUIZZES (mnursel;1975;1978)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This introductory lesson briefly discusses maternal and child health nursing, and offers quizzes on vocabulary that the student should know before beginning the "Maternal-Child Nursing Course."
none;open-ended;nursing students

MATERNAL-CHILD NURSING COURSE, QUIZZES FOR PRENATAL LESSONS (mnursell;1975;1979)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
The student of Maternal and Child Nursing should be familiar with terms found in the vocabulary quizzes in this lesson. Each quiz contains 25 terms which are used or introduced in the lessons indicated.
none;none;nursing students

MECHANISM OF LABOR (mnurse5;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson is concerned with a normal delivery and emphasizes the mechanism of labor - the progressive movements of the fetus through the pelvic passage.
none;none;nursing students

MEDICATIONS FOR USE IN OBSTETRICS (delivery;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
The lesson covers the dosages, action, nursing responsibilities and side effects of various medications used in the nursing of mothers. Seven patient situations which require drug intervention are given the student, and the use of the appropriate drug therapy for each situation may be investigated.
none;50-60 minutes;nursing students

OBSTETRICAL ANATOMY PART I (mnurse3;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson is concerned with the culmination of pregnancy: labor, the series of processes by which the infant and accessory parts are expelled from the mother's body, and delivery, the actual expulsion of the infant.
none;none;nursing students

OBSTETRICAL ANATOMY PART II (mnurse4;1975;unpublished)
Bitzer, Maryann; Boudreaux, Martha
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson continues the discussion begun in "Obstetrical Anatomy Part I" with information about the presentation, position and degree of descent, which is necessary to evaluate the progress of labor.
none;none;nursing students

PHENOMENA OF LABOR PROCESS (labpro;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
The general objective of this lesson is to investigate the various methods of assessing progress in labor and delivery and to define the terms used in describing the status of labor of a patient.
microfiche;60-90 minutes;nursing students

Octal system

COMPUTER NUMBERS (numbers;1975;unpublished)
Strass, Gregory; Montanelli, Richard; Friedman, H. George
Computer Science Dept., University of Illinois
This lesson is designed primarily for teaching about computers such as the IBM System/360/370 series, with which hexadecimal numbers are useful. The discussion of storage of integer and real numbers is specifically 360/370 oriented. The lesson can be set up to instruct in either octal or hexadecimal numbers or both.
none;none;instructors and students of computer science

Ophthalmology, Veterinary

see Veterinary ophthalmology

Opinion survey

PLATO

OPINION SURVEY AND ANALYSIS PACKAGE (opinion;1976;1977)
Siegel, Martin A
Comp.-based Educ. Res. Lab., University of Illinois
Detailed instructions are given the user of the PLATO Opinion Survey as to how to administer an opinion survey and analyze the results.
none;open-ended;PLATO teachers

Optical instruments

INTRODUCTION TO OPTICAL MICROSCOPY (mscope;1977;unpublished)
Snellen, James E
School of Basic Medical Sciences, Univ. of Illinois
This lesson acquaints the student with some of the fundamental principles of optical microscopy. It includes the nature of vision, different types of lenses, and the optical microscope.
none;15 minutes;first year medical students

Optical rotation

INTRODUCTION TO OPTICAL ACTIVITY (chiral;1974;unpublished)
Smith, Stanley
Chemistry Department, University of Illinois

As an introduction to the subject of optical activity of organic molecules, 3-D representations of some organic molecules and their mirror images are graphically presented. The recognition of chiral molecules, the measurement of the rotation of 2-butanol and the subject of optical purity is also discussed and illustrated.

none;59 minutes;college/university students

Optics

Geometrical

EXERCISE WITH TWO PLANE MIRRORS (mirrors1;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois

Exercises are provided in locating the images of a given object produced by two perpendicular plane mirrors when the location of the images are found and marked. The appropriate rays are drawn on the PLATO screen. A HELP section contains a sample illustration.

none;none;students studying optics in elementary physics

GEOMETRIC OPTICS - THIN LENS EXERCISES (lenses;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois

Graphical exercises are presented in drawing the principal rays for a concave and a convex thin lens. Calculation of the image positions is also part of the exercises.

none;none;students in elementary physics

SIGN CONVENTIONS FOR MIRRORS, LENSES, REFRACTING SURFACES (optics1;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

In this lesson the student is shown various optical elements with an object and an image in varying positions. The exercises randomly generate a lens, mirror, or curved surface, draw the principal rays, and ask for the magnitude and signs of the focal length, object and image positions, and radius of curvature. The HELP section contains the "set of rules".

none;none;students of optics in elementary physics

Physical

POLARIZERS -- FILTERS OF COHERENT ELECTROMAGNETIC RADIATION (polarize;1973;unpublished)
Bennett, Carol D
Physics Department, University of Illinois

The lesson provides a tool for working problems having to do with polarizers. A review of the properties of polarizers is presented and then the student is asked to do several exercises based on these properties. A template is given with help for working problems on 1 to 3 polarizers,

none;none;students of elementary physics

Oral contraceptives

DRUGS: ORAL CONTRACEPTIVES (kumc44;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson discusses oral contraception through hormone inhibition of the normal menstrual cycle. Some of the adversities are also mentioned.
none;15 minutes;first year medical students

ORAL CONTRACEPTIVES AND NEOPLASIA (ocneo;1979;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the types of epidemiological studies used to investigate the possible relationships between oral contraceptive use and neoplasia. The risk factors for contracting breast, cervical, endometrial, and liver cancer are reviewed, and the results of studies relating oral contraceptive use to the aforementioned cancers are presented.
none;30 minutes;first year medical students/health science students

Organocopper compounds

ORGANOMETALLIC CHEMISTRY (orgmet;1976;1978)
Wiegers, Karl
Chemistry Dept., Univ. of Illinois, Urbana, Ill.
The lesson discusses the structure, preparation and reactions of several classes of organometallic compounds.
none;none;college or university students of organic chemistry

Organolithium compounds

ORGANOMETALLIC CHEMISTRY (orgmet;1976;1978)
Wiegers, Karl
Chemistry Dept., Univ. of Illinois, Urbana, Ill.
The lesson discusses the structure, preparation and reactions of several classes of organometallic compounds.
none;none;college or university students of organic chemistry

Organometallic compounds

ORGANOMETALLIC CHEMISTRY (orgmet;1976;1978)
Wiegers, Karl
Chemistry Dept., Univ. of Illinois, Urbana, Ill.
The lesson discusses the structure, preparation and reactions of several classes of organometallic compounds.
none;none;college or university students of organic chemistry

Orthopedic surgery

MULTIPLE CONGENITAL DEFORMITIES: MANAGEMENT AND PROGNOSIS (lumpy;1977;unpublished)
Trotter, David; Barmada, Riad; Nelson, Charles D
Abraham Lincoln School of Medicine, Univ. of Illinois
This lesson is a simulated case study of an infant girl with multiple congenital deformities. The student is guided through a series of tests and treatments to diagnose her problem and correct the defects. Questions are asked about procedures at various points in the lesson.
microfiche;none;medical students

PAINFUL KNEE IN A CHILD: MANAGEMENT AND PROGNOSIS (knee;1977;unpublished)
Trotter, David; Ray, Robert D; Nelson, Charles D
Abraham Lincoln School of Medicine, Univ. of Illinois
In this simulated case study, an eight-year-old male is presented with a painful knee resulting from a street fight. The student must diagnose and treat the problem from historical and physical information gathered, and from the interpretation of x-rays.
microfiche;none;medical students

SWOLLEN, PALPABLE MASS IN A SEVEN-YEAR-OLD BOY (fibula;1978;unpublished)
Trotter, David; Barmada, Riad; Ray, Robert D; et al.
Abraham Lincoln School of Medicine, Univ. of Illinois
In this case study a seven-year-old male suffers from malaise, fever and intermittent pain in the right proximal leg. The boy has been complaining of pain for about two months, but the parents dismissed it as "growing pains". The student must work up the case with history, physical, lab studies, diagnosis and treatment.
microfiche;15 minutes;medical students

TENDER, PAINFUL EXTREMITIES (femur;1977;unpublished)
Trotter, David; Ray, Robert D; Barmada, Riad
Abraham Lincoln School of Medicine, Univ. of Illinois
This case study presents a four-year-old male with a 72-hour history of irritability, fever and dyspnea. The student must offer tentative diagnosis, gather historical, physical and lab data, diagnose and treat the problem.
microfiche;none;medical students

TIBIAL NONUNION: MANAGEMENT AND PROGNOSIS (tibia;1977;unpublished)
Trotter, David; Nelson, Charles D; Ray, Robert D
Abraham Lincoln School of Medicine, Univ. of Illinois
This lesson presents a simulated case study of a thirty-year-old male complaining of pains in the left leg. Subsequent examination reveals a fracture of four years duration with extensive complications. The student must answer a number of questions to manage the case.
microfiche;none;medical students

Orthopedic surgery--Examinations, questions, etc.

MULTIPLE CONGENITAL DEFORMITIES: MANAGEMENT AND PROGNOSIS
(lumpy;1977;unpublished)
Trotter, David; Barmada, Riad; Nelson, Charles D
Abraham Lincoln School of Medicine, Univ. of Illinois
This lesson is a simulated case study of an infant girl with multiple congenital deformities. The student is guided through a series of tests and treatments to diagnose her problem and correct the defects. Questions are asked about procedures at various points in the lesson.
microfiche;none;medical students

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microfiche;none;medical students

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microfiche;15 minutes;medical students

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Trotter, David; Nelson, Charles D; Ray, Robert D
Abraham Lincoln School of Medicine, Univ. of Illinois
This lesson presents a simulated case study of a thirty-year-old male complaining of pains in the left leg. Subsequent examination reveals a fracture of four years duration with extensive complications. The student must answer a number of questions to manage the case.
microfiche;none;medical students

Osmoregulation

RENAL PHYSIOLOGY - BODY FLUIDS IV: FLUID COMPARTMENT MECH.
(bfcom3;1978;unpublished)
McCraw, Gordon W; Lawrance, David P; Sommers, Jack M; et al.
Oklahoma University Health Sciences Center
This lesson presents a description of the fluid inputs and outputs of the body, including a description of the body's fluid compartments, with an associated fluid input/output chart for student practice and a post test for adequate feedback.
none;15 minutes;first year medical school

RENAL PHYSIOLOGY - BODY FLUIDS PART II: FLUID COMPARTMENTS (bfcom1;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
In this lesson the student will become familiar with total body water, extracellular, interstitial and intracellular fluids, and lean body mass.
none;15 minutes;first year medical students

RENAL PHYSIOLOGY - BODY FLUIDS PART I: OSMOTIC FORCES (bfcom4;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
In this lesson the student is presented with the material that must be mastered prior to studying renal physiology. Under the heading of osmotic forces, solute concentration, osmolality, the components of plasma and the significance of the anion gap are the subjects discussed.
none;20 minutes;first year medical students

Osmosis

DIFFUSION AND OSMOSIS (osmosis;1976;1977)
Boggs, Stephen H
CERL, University of Illinois
The lesson is an introduction to the ideas of diffusion and osmosis. After the subject of diffusion is treated, there are sections on molecular motion, membranes (with a demonstration of osmosis), and a U-tube and blood cell experiment.
none;35 minutes;college/university students

Outlines

RESEARCH PAPER OUTLINE (outlining;1979;unpublished)
Robles, Rob
Department of English, University of Illinois
This lesson is intended to be used in a 100-level rhetoric and composition class as part of the research paper unit. It will provide practice in connecting ideas, which is very important in organizing the material for a research paper.
none;none;rhetoric and composition students

Oxidation

BALANCING OXIDATION-REDUCTION EQUATIONS (balredox;1975;1977)
Smith, Stanley
Chemistry Department, U. of Illinois, Urbana IL
The lesson introduces the concept of oxidation being a loss in electrons in a chemical reaction and reduction being a gain in electrons. The net transfer of electrons from one substance to another in a reaction being equal, two common methods for balancing equations are shown and problems using each method are given.
touch panel;31 minutes;college/university students

Oxidation-reduction reaction

ALCOHOLS (roht;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson teaches the common and IUPAC names of alcohols. It discusses the preparation by reduction of C=O, hydration, hydroboration, hydrolysis of HX, and Grignard additions. The reactions included are: oxidation, conversion to RX, dehydration, salt and ether formation.
none;89 minutes;college/university students

BALANCING OXIDATION-REDUCTION EQUATIONS (balredox;1975;1977)
Smith, Stanley
Chemistry Department, U. of Illinois, Urbana IL
The lesson introduces the concept of oxidation being a loss in electrons in a chemical reaction and reduction being a gain in electrons. The net transfer of electrons from one substance to another in a reaction being equal, two common methods for balancing equations are shown and problems using each method are given.
touch panel;31 minutes;college/university students

Paleogeography

NEW GLOBAL TECTONICS AND CONTINENTAL DRIFT (earth;1975;unpublished)
Scotese, Christopher
University of Illinois Circle Campus, Chicago, Ill.
This lesson presents a unifying, working hypothesis called plate tectonics, which provides a kinematic model of the upper layer of the earth. It can be used to make quantitative predictions about most phenomena studied by the different disciplines of the earth sciences.
none;open-ended;students of earth sciences

Paleomagnetism

NEW GLOBAL TECTONICS AND CONTINENTAL DRIFT (earth;1975;unpublished)
Scotese, Christopher
University of Illinois Circle Campus, Chicago, Ill.
This lesson presents a unifying, working hypothesis called plate tectonics, which provides a kinematic model of the upper layer of the earth. It can be used to make quantitative predictions about most phenomena studied by the different disciplines of the earth sciences.
none;open-ended;students of earth sciences

Palpation

PHYSICAL EXAMINATION OF THE RESPIRATORY SYSTEM (shp73;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson teaches the general organization of the respiratory system exam, the physiological principles upon which the examination is based and the interpretation of the findings in a respiratory system. The examination of the upper airway is not covered.
The student will need a stethoscope.;60 minutes;physicians' assistants

Parabola

EXPERIMENTING WITH PARABOLAS (parab;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.

In this lesson the student is asked to supply a value for the variable in an open sentence. PLATO then graphs the sentence. As many sentences can be graphed as the student chooses; the previous equations and plotted symbols remain on the screen for comparison.

none;open-ended;elementary mathematics students

Paramedical education

ALLERGENS--THEIR NATURE AND DISTRIBUTION (shp75;1975;unpublished)
Roseman, Gerald J
Sheppard Air Force Base, Texas

In this lesson the student will learn what substances are allergens, where allergens are commonly found, when people are exposed to allergens and how response to allergens varies.

none;30-45 minutes;physicians' assistants

ALLERGY MECHANISM AND BASIC ALLERGY TERMINOLOGY (shp49;1975;unpublished)
Roseman, Gerald J
Sheppard Air Force Base, Texas

This lesson will enable the student to become familiar with the terminology used to describe the allergy mechanism, to differentiate between stages of this mechanism and to name the tissues affected in allergy and their physiological response.

none;90 minutes;physicians' assistants

ANATOMICAL REFERENCE TERMINOLOGY (shp56;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas

This lesson will teach the student to name the "standard position" of the body for proper anatomical reference, the correct anatomical reference terms based upon descriptive phrases displayed with appropriate drawings, and the three anatomical "planes of reference". A "matching drill" of twelve anatomical reference definitions is included.

none;20-30 minutes;physicians' assistants

Parasympathomimetric agents

AUTON. PHARMACOL.: CHOLINERGIC MECHANISMS & USES (kumc9;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson discusses the effects of stimulation and blockade of muscarinic and nicotinic receptors.

none;25 minutes;first year medical students

Patella

HUMAN SKELETAL SYSTEM: PART III - THIGH AND LEG (skelsys3;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thigh and leg. Surfaces, borders and markings of the femur, patella, tibia and fiblua are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

Pathology

CONGENITAL CARDIAC DEFECTS (cardianom;1977;unpublished)
Choate, B. Paul; McCraw, Gordon W; Sharpe, George
Oklahoma University Health Sciences Center

This lesson is concerned with the clinical and pathological aspects of various congenital cardiac defects. It also covers the development and etiology of such defects. Some of the defects covered are ventriculo-septal defects, transposition of vessels, valvular and combinations defects.

optional touch panel;30 minutes;first year medical students

PNEUMOTHORAX AND INTERSTITIAL EMPHYSEMA (pneumo;1977;unpublished)
McCraw, Gordon W; Lawrance, David P; Coalson, J. J.
Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of interstitial emphysema and pneumothorax. The classification schema presented includes that favored by pathologists and that used by clinicians. The material is presented in a highly indexed outline format, facilitating access to specific areas.

optional touch panel;none;first year medical students

Pathology, Cellular

CELL INJURY II: ORGANELLE CHANGES: ACUTE CELL INJURY (cell2;1977;unpublished)
Mergner, Wolfgang; Schiff, Denise
School of Medicine, Univ. of Maryland, Baltimore

This lesson stresses the biochemical and structural changes in acute cell injury, as well as altered organelles. Mitochondrial changes are discussed in detail and compared to changes in the cytosol, nucleus, lysosol, cell membrane and endoplasmic reticulum. Reaction to cell injury is subdivided into three phases: before, at or after the point-of-no-return.

none;45 minutes;first year medical students

CELL INJURY: INTRO. TO CELL INJURY & CELL DEATH (cellinjury;1976;unpublished)
Mergner, Wolfgang; Bennett, Charles
School of Medicine, Univ. of Maryland, Baltimore
This lesson defines cell injury, distinguishes acute chronic cell injury, defines reversible and irreversible cell injury, and differentiates between the two by defining the "point of no return." The lesson also describes the three factors of ischemic cell injury: anoxia, lack of perfusion, and lack of substrate.
none;15 minutes;first year medical students

Pediatric nursing

PEDIATRIC PHARMACOLOGY FOR NURSES (pedspharm;1976;unpublished)
Pugh, Elizabeth J
School of Nursing, University of Illinois
A self-study unit for nurses administering medications to children. This program is designed to be used as a bridge between past knowledge and that which will be necessary for safe practice with children.
none;none;junior level nursing students

Pediatric pharmacology

INTRODUCTORY PHARMACOLOGY: FETAL PHARMACOLOGY (kumc7;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson on fetal pharmacology discusses the influence of drugs on the neonate's skeletal and cardiac musculature.
none;15 minutes;first year medical students

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Pugh, Elizabeth J
School of Nursing, University of Illinois
A self-study unit for nurses administering medications to children. This program is designed to be used as a bridge between past knowledge and that which will be necessary for safe practice with children.
none;none;junior level nursing students

Pelvic girdle

HUMAN SKELETAL SYSTEM: PT.II - PELVIC GIRDLE (skelsys;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This lesson on osteology introduces the student to the bones of the pelvic girdle. Surfaces, borders and markings of the hipbone, sacrum and coccyx are illustrated and identified. The bony landmarks of the pelvic inlet and outlet are identified, as well as characteristics which aid in determining the sex of the pelvis. A post-test is included.
none;20 minutes;first year medical students

Pelvis

ANATOMY QUIZ: PELVIS AND PERINEUM (anaquiz2;1976;unpublished)
Kahn, Madelyn I; Gaburo, K; McCormick, R
School of Basic Medical Sciences, Univ. of Illinois

This lesson features four separate areas - each area presenting questions in a different format (e.g. fill in blank and sequencing). The content includes veins, arteries, nerves, compartments and muscles of the perineum; features of the male and female reproductive systems, and ligaments of the female reproductive system. Score is presented and evaluated.

none;15 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PT.II - PELVIC GIRDLE (skelsys;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This lesson on osteology introduces the student to the bones of the pelvic girdle. Surfaces, borders and markings of the hipbone, sacrum and coccyx are illustrated and identified. The bony landmarks of the pelvic inlet and outlet are identified, as well as characteristics which aid in determining the sex of the pelvis. A post-test is included.

none;20 minutes;first year medical students

Percussion

PHYSICAL EXAMINATION OF THE RESPIRATORY SYSTEM (shp73;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas

This lesson teaches the general organization of the respiratory system exam, the physiological principles upon which the examination is based and the interpretation of the findings in a respiratory system. The examination of the upper airway is not covered.

The student will need a stethoscope.;60 minutes;physicians' assistants

Perineum

ANATOMY QUIZ: PELVIS AND PERINEUM (anaquiz2;1976;unpublished)
Kahn, Madelyn I; Gaburo, K; McCormick, R
School of Basic Medical Sciences, Univ. of Illinois

This lesson features four separate areas - each area presenting questions in a different format (e.g. fill in blank and sequencing). The content includes veins, arteries, nerves, compartments and muscles of the perineum; features of the male and female reproductive systems, and ligaments of the female reproductive system. Score is presented and evaluated.

none;15 minutes;first year medical students

Periodic health examination

PROBLEM SOLVING IN CLINICAL MEDICINE: CHECKUP (feinz8;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois

In this simulation the patient is a 53-year-old woman who wants a "check-up" after 12 years with another doctor. The user is a student physician working for an ambulatory care facility who has been assigned to this woman. Choices are made from options provided and each selection is discussed.

none;none;medical students

SIMULATED PATIENT ENCOUNTER (shp79;1973;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas

This lesson provides a clinical simulation in which the student takes a medical history, performs a physical exam, requests laboratory tests to be run, makes a diagnosis and consults with the patient.

none;1-2 hours;physicians' assistants

Permutations

PERMUTATIONS AND COMBINATIONS (elstat8;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.

This lesson deals with permutations, the products of consecutive positive integers and combinations.

none;open-ended;college/university students

Phagocytosis

CYTOTOXIC HYPERSENSITIVITY (mdimmum;1975;unpublished)
Kessel, Ross; Wagner, Kenneth; Cohen, Barry; et al.
University of Maryland and University of Illinois

This lesson deals with cytotoxic (Type II) hypersensitivity. It covers the mediators and the mechanisms of cytotoxic hypersensitivity as well as the laboratory investigation, management and pathology of some cytotoxic disease states.

none;30 minutes;first year medical students

Pharmacology

Autonomic nervous system

AUTONOMIC PHARMACOLOGY I: GENERAL INTRODUCTION AND REVIEW (kumc3;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Felty, Michael; et al.
University of Kansas / University of Illinois

This lesson discusses general concepts of the autonomic nervous system including synthesis, degradation and effects of the various neurotransmitters. Questions to review the material are included.

none;15 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: ADRENERGIC AGENTS (autotut;1975;unpublished)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson covers various noradrenergic synaptic processes, including norepinephrine synthesis, granular storage, terminal release and re-uptake, catabolism and receptor interaction. The sequence of questions/information is dependent on student performance. Clinically pertinent information is used to reinforce concepts.
none;30 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: ARTERIAL BLOOD PRESSURE IN THE DOG (kumc12;1975;unpublished)
Kansas University Medical Center; Hody, George; Stull, Richard; et al.
University of Kansas / University of Illinois
This lesson is a brief graphic quiz over various autonomic receptor agonists and antagonists, and their effects on certain cardiovascular parameters in the laboratory.
none;5 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: REVIEW (kumc18;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson is a quiz covering adrenergic and cholinergic related compounds, including stimulants and blocking agents. The questions are oriented toward basic mechanisms of these blocking agents, but draw clinical correlates as well.
none;15 minutes;first year medical students

AUTON. PHARMACOL. II: SYNTH. & BIOTRANSF. OF NEUROTRANS. (kumc4;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson treats the synthesis and degradation of mediators of the autonomic nervous system, including the common synthetic pathway of epinephrine and acetylcholine.
none;10 minutes;first year medical students

AUTON. PHARMACOL.: ADRENERGIC MECHANISMS AND USES (kumc13;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson treats the effects of adrenergic stimulating and blocking agents. The concept of alpha and beta adrenergic receptors is included.
none;10 minutes;first year medical students

AUTON. PHARMACOL.: CHOLINERGIC MECHANISMS & USES (kumc9;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the effects of stimulation and blockade of muscarinic and nicotinic receptors.
none;25 minutes;first year medical students

GLAUCOMA (bazzoon;1978;unpublished)
Farney, Thomas L; Lee, Tom Jer-Fu
Southern Illinois University School of Medicine
This lesson consists of eleven sections which allow the student to learn about the anatomy and physiology of glaucoma, selectively review aspects of the disease process, and assess his/her knowledge of relevant autonomic pharmacology.
none;open-ended;first year medical students

LAB. EXPT. IN THE PHARMACOLOGY OF THE AUTO. NERVOUS SYSTEM (labsim;1975;1977)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
The student is shown the effects of certain autonomic agents on several aspects of the cardiovascular system in the "anesthetized laboratory dog".

After making the observations, an opportunity is given to apply the information by identifying a unknown compound.
none;25 minutes;medical students

NEUROHUMOR METABOLISM: METAB. PATHS OF PRIMARY NEUROMEDIATOR (nhumor;1975;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois
The lesson provides information regarding the synthesis and degradation of certain primary chemical mediators of the autonomic and central nervous systems, including dopamine, norepinephrine, epinephrine, serotonin, and acetylcholine. A drill and practice section over various structures and pathways is included.
none;25 minutes;first year medical students

STRUCTOQUIZ: A "DRILL AND PRACTICE" SEQUENCE IN PHARMACOLOGY (structo;1975;unpublished)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson contains information and drill and practice sequences for the chemical structures of steroids, phenylalkylamines, phenothiazines, thioxanthenes and tricyclic antidepressants. The student can opt to take a quiz over one class of compounds or over all five.
none;open-ended;first year medical students

Autonomic nervous system--Examinations, questions, etc.

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Kansas University Medical Center; Crow, J. W.; Felty, Michael; et al.
University of Kansas / University of Illinois
This lesson discusses general concepts of the autonomic nervous system including synthesis, degradation and effects of the various neurotransmitters. Questions to review the material are included.
none;15 minutes;first year medical students

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Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois

This lesson covers various noradrenergic synaptic processes, including norepinephrine synthesis, granular storage, terminal release and re-uptake, catabolism and receptor interaction. The sequence of questions/information is dependent on student performance. Clinically pertinent information is used to reinforce concepts.

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This lesson is a brief graphic quiz over various autonomic receptor agonists and antagonists, and their effects on certain cardiovascular parameters in the laboratory.

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Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois

This lesson is a quiz covering adrenergic and cholinergic related compounds, including stimulants and blocking agents. The questions are oriented toward basic mechanisms of these blocking agents, but draw clinical correlates as well.

none;15 minutes;first year medical students

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Kansas University Medical Center; Crow, J. W.; Cohen, Barry; et al.
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This lesson treats the synthesis and degradation of mediators of the autonomic nervous system, including the common synthetic pathway of epinephrine and acetylcholine.

none;10 minutes;first year medical students

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This lesson treats the effects of adrenergic stimulating and blocking agents. The concept of alpha and beta adrenergic receptors is included.

none;10 minutes;first year medical students

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Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson discusses the effects of stimulation and blockade of muscarinic and nicotinic receptors.

none;25 minutes;first year medical students

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Farney, Thomas L; Lee, Tom Jer-Fu
Southern Illinois University School of Medicine

This lesson consists of eleven sections which allow the student to learn about the anatomy and physiology of glaucoma, selectively review aspects of the disease process, and assess his/her knowledge of relevant autonomic pharmacology.

none;open-ended;first year medical students

STRUCTOQUIZ: A "DRILL AND PRACTICE" SEQUENCE IN PHARMACOLOGY (structo;1975;unpublished)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois

This lesson contains information and drill and practice sequences for the chemical structures of steroids, phenylalkylamines, phenothiazines, thioxanthenes and tricyclic antidepressants. The student can opt to take a quiz over one class of compounds or over all five.

none;open-ended ;first year medical students

Cardiovascular pharmacology

CASE HISTORY: MANAGEMENT OF HYPERTENSION (kumc36;1975;unpublished)
Kansas University Medical Center; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois

This lesson simulates the examination, diagnosis and treatment of an hypertensive patient. Discussion of therapeutic agents is provided.

none;15 minutes;first year medical students

DRUGS: HEMATINIC AGENTS (kumc47;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois

This lesson discusses the different anemias. Therapy precribed is based on the etiology of the type of anemia.

none;10 minutes;first year medical students

THE TREATMENT OF CARDIAC ARRHYTHMIAS (kumc5;1975;unpublished)
Kansas University Medical Center; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois

This lesson discusses naturally occurring and digitalis-induced arrhythmias and the drugs used for treatment.

none;15 minutes;first year medical students

Central nervous system

ALCOHOLISM: A PHARMACOLOGIC OVERVIEW (booze2;1976;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois
The lesson (linear instructional format) is on the pharmacology and toxicology of chronic excess usage of ethanol. Topical areas (indexable) presented include major pharmacologic effects of chronic ingestion of ethanol on major body systems; ethanol tolerance and dependence symptoms of withdrawal from chronic usage; pharmacologic treatments used.
none;30 minutes;first year medical students

CNS PHARMACOLOGY: ANALGESIA REVIEW (kumc32;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses morphine-type analgesic agents.
none;15 minutes;first year medical students

CNS PHARMACOLOGY: ANESTHESIA CASE STUDY (kumc38;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents questions based upon a case history regarding general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: ANESTHESIA QUIZ (kumc30;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson is a quiz on basic principles of general anesthesia and clinically pertinent gaseous anesthetic agents.
none;15 minutes;first year medical students

CNS PHARMACOLOGY: ANTICONVULSANT QUIZ (kumc20;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Woods, James; et al.
University of Kansas / University of Illinois
This lesson is a quiz on clinically pertinent anticonvulsant agents.
none;15 minutes;first year medical students

CNS PHARMACOLOGY: ANTIDEPRESSANT QUIZ (kumc21;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson is a quiz over general principles of depression and clinically pertinent antidepressant agents.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: GENERAL ANESTHESIA (kumc29;1975;unpublished)
Kansas University Medical Center; Nelson, S; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson covers the general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: SEDATIVES AND HYPNOTICS (kumc19;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the general chemistry and pharmacology of sedative-hypnotics. Those treated are primarily barbiturates, certain anithistamines, chloral hydrate, ethchlorvynol, glutethamide, methaqualone and other clinically pertinent sedative-hypnotic agents.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: STIMULANTS AND HALLUCINOGENS (kumc22;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents material on hallucinogenic agents and central nervous system stimulants.
none;10 minutes;first year medical students

CNS PHARM.: ASPIRIN-TYPE ANALGESICS & ANTI-INFLAM. AGENTS (kumc28;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the analgesic and anti-inflammatory effects of salicylates and other aspirin-type agents.
none;20 minutes;first year medical students

DRUGS: ANTI-INFLAMMATORY QUIZ (kumc41;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides a quiz over the anti-inflammatory drug materials presented in the PLATO pharmacology lessons.
none;10 minutes;first year medical students

DRUGS: ANTI-INFLAMMATORY AGENTS - CONSULT (kumc35;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
In this lesson the student serves as a consultant and is asked to answer certain questions concerning the treatment of a patient.
none;15 minutes;first year medical students

DRUGS: DIURETICS QUIZ I (kumc52;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson contains the first of two quizzes on diuretic drugs.
none;15 minutes;first year medical students

DRUGS: DIURETICS QUIZ II (kumc57;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson contains the second of two quizzes on diuretic drugs.
none;30 minutes;first year medical students

DRUGS: LOCAL ANESTHETIC AGENTS (kumc50;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses local anesthetics, their uses and problems.
none;10 minutes;first year medical students

DRUGS: LOCAL ANESTHETIC REVIEW (kumc48;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides a quiz and review of material dealing with local anesthetics.
none;15 minutes;first year medical students

NEUROHUMOR METABOLISM: METAB. PATHS OF PRIMARY NEUROMEDIATOR (nhumor;1975;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois
The lesson provides information regarding the synthesis and degradation of certain primary chemical mediators of the autonomic and central nervous systems, including dopamine, norepinephrine, epinephrine, serotonin, and acetylcholine. A drill and practice section over various structures and pathways is included.
none;25 minutes;first year medical students

THE PHARMACOLOGY OF ETHANOL (boozel;1976;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois
This is a linear instructional lesson on the pharmacology of ethanol. Topical areas include: major effects on the CNS, CVS, GI tract, liver, kidney, and endocrine system: adsorption, distribution, metabolism, and elimination of ethanol.
none;25 minutes;first year medical students

PHARMACOLOGY OF MARIHUANA (mari;1976;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciencec, Univ. of Illinois
This is a linear lesson which presents information regarding the pharmacology of marihuana as text with inserted questions. The information presented includes: patterns of use; biologic disposition; effects; and aspects of tolerance to and physical dependence on marihuana.
none;20 minutes;first year medical students

STRUCTOQUIZ: A "DRILL AND PRACTICE" SEQUENCE IN PHARMACOLOGY (structo;1975;unpublished)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson contains information and drill and practice sequences for the chemical structures of steroids, phenylalkylamines, phenothiazines, thioxanthenes and tricyclic antidepressants. The student can opt to take a quiz over one class of compounds or over all five.
none;open-ended ;first year medical students

Central nervous system--Examinations, questions, etc.

CNS PHARMACOLOGY: ANALGESIA REVIEW (kumc32;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
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This lesson discusses morphine-type analgesic agents.
none;15 minutes;first year medical students

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Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
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This lesson is a quiz on basic principles of general anesthesia and clinically pertinent gaseous anesthetic agents.
none;15 minutes;first year medical students

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This lesson is a quiz on clinically pertinent anticonvulsant agents.
none;15 minutes;first year medical students

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Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
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This lesson is a quiz over general principles of depression and clinically pertinent antidepressant agents.
none;10 minutes;first year medical students

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Kansas University Medical Center; Nelson, S; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson covers the general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: REVIEW QUIZ (kumc33;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson is a short answer/multiple choice quiz over the topics covered in the "CNS Pharmacology" lessons. It is intended for review, so the correct answer is always provided and the student is allowed to move on, regardless of the response. Individual student scoring is presented at the end.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: SEDATIVES AND HYPNOTICS (kumc19;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the general chemistry and pharmacology of sedative-hypnotics. Those treated are primarily barbiturates, certain anithistamines, chloral hydrate, ethchlorvynol, glutethamide, methaqualone and other clinically pertinent sedative-hypnotic agents.
none;10 minutes;first year medical students

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Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson contains the second of two quizzes on diuretic drugs.
none;30 minutes;first year medical students

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Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
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School of Basic Medical Sciences, Univ. of Illinois
This lesson contains information and drill and practice sequences for the chemical structures of steroids, phenylalkylamines, phenothiazines, thioxanthenes and tricyclic antidepressants. The student can opt to take a quiz over one class of compounds or over all five.
none;open-ended ;first year medical students

Chemotherapy

ANTIMALARIAL CHEMOTHERAPY (plasmodia;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for malarial infection. It includes the drug spectra, modes of action, indications and contraindications. Questions are incorporated for interaction and self-evaluation.
optional touch panel;none;first year medical students

CHEMOTHERAPEUTICS CASE SERIES: ANTIBIOTICS (kumc16;1975;unpublished)
Kansas University Medical Center; Hody, George; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents several disease cases and asks the student to select appropriate treatment from the choices offered.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT I (kumc31;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson presents the student with a sick patient, symptoms, medical history and laboratory reports, and asks that the student make a diagnosis.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT II (kumc40;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents several patients to the student, describes the illnesses, and provides discussion of the therapies and medications that have been prescribed by "Dr. PLATO".
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT III (kumc24;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry
University of Kansas / University of Illinois
This lesson presents patients and symptoms, and asks the student to practice making diagnoses and prescribing treatment.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT IV (kumc25;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
In this lesson, several disease cases dealing with antibiotic treatment are discussed.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: ANTIBIOTICS CONSULT V (kumc26;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents several disease cases and discusses the positive and negative aspects of the antibiotics chosen for treatment.
none;10 minutes;first year medical students

CHEMOTHERAPEUTICS: MALIGNANT NEOPLASMS (kumc34;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson discusses chemotherapeutic treatment of cancer. The relationship of tumor cell toxicity to host cell toxicity known as chemotherapeutic index is explained.
none;20 minutes;first year medical students

CHEMOTHERAPEUTICS: REVIEW QUESTIONS (kumc27;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
Review questions based on the material presented in the "Chemotherapeutics" lessons are presented in this lesson.
none;10 minutes;first year medical students

CHEMOTHERAPY OF AMEBIASIS (amoeba;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for Entamoeba histolytica infection. It includes modes of action, toxicities and contraindications. Questions are incorporated for interaction.
optional touch panel;20 minutes;first year medical students

CHEMOTHERAPY OF MISCELLANEOUS PROTOZOAN INFECTIONS (mispro;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment of miscellaneous protozoan infections. It includes the drug spectra, modes of action, indications and contraindications. Questions are included for interaction and self-evaluation.
optional touch panel;45 minutes;first year medical students

EXTRAINTESTINAL ANTIHELMINTHICS (exhel;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for extraintestinal helminths. It includes the drug spectra, modes of action, indications and contrindications. Questions are incorporated for interaction and for self-evaluation.
optional touch panel;30 minutes;first year medical students

INTESTINAL ANTHELMINTHICS (helminth;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for intestinal helminths. It includes drug spectra, modes of action, indications and contraindications. Questions are incorporated for interaction and self-assessment of subject mastery.
optional touch panel;30 minutes;first year medical students

Chemotherapy--Examinations, questions, etc.

ANTIMALARIAL CHEMOTHERAPY (plasmodia;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for malarial infection. It includes the drug spectra, modes of action, indications and contraindications. Questions are incorporated for interaction and self-evaluation.
optional touch panel;none;first year medical students

CHEMOTHERAPEUTICS: REVIEW QUESTIONS (kumc27;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
Review questions based on the material presented in the "Chemotherapeutics" lessons are presented in this lesson.
none;10 minutes;first year medical students

CHEMOTHERAPY OF AMEBIASIS (amoeba;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for Entamoeba histolytica infection. It includes modes of action, toxicities and contraindications. Questions are incorporated for interaction.
optional touch panel;20 minutes;first year medical students

CHEMOTHERAPY OF MISCELLANEOUS PROTOZOAN INFECTIONS (mispro;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment of miscellaneous protozoan infections. It includes the drug spectra, modes of action, indications and contraindications. Questions are included for interaction and self-evaluation.
optional touch panel;45 minutes;first year medical students

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Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for extraintestinal helminths. It includes the drug spectra, modes of action, indications and contrindications. Questions are incorporated for interaction and for self-evaluation.
optional touch panel;30 minutes;first year medical students

INTESTINAL ANTHELMINTHICS (helminth;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for intestinal helminths. It includes drug spectra, modes of action, indications and contraindications. Questions are incorporated for interaction and self-assessment of subject mastery.
optional touch panel;30 minutes;first year medical students

Endocrinology

DRUGS: ADRENAL STEROIDS (kumc43;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson first reviews some diseases of hyper- and hypothyroidism, then discusses the therapeutic use of steroid drugs in their treatment.
none;10 minutes;first year medical students

DRUGS: INSULIN AND ORAL HYPOGLYCEMIC AGENTS (kumc58;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides some background material on diabetes and discusses the effects of insulin and other oral hypoglycemic agents on the condition.
none;10 minutes;first year medical students

DRUGS: ORAL CONTRACEPTIVES (kumc44;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson discusses oral contraception through hormone inhibition of the normal menstrual cycle. Some of the adversities are also mentioned.
none;15 minutes;first year medical students

DRUGS: THYROID AGENTS (kumc49;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson describes and reviews hyper- and hypo- thyroid conditions, treats the function of the thyroid gland, and discusses some thyroid agents and their effect upon the gland.
none;10 minutes;first year medical students

ENDOCRINE PHARMACOLOGY (endopharm2;1976;unpublished)
Kauffman, Frederick; Schwartz, Sandra
School of Medicine, Univ. of Maryland, Baltimore
This lesson reviews hormones and hormone actions, relating actions and uses of drugs to the endocrine system. The major classes of endocrine agents and general sites of action, as well as the major mechanisms of action of these agents, are discussed.
none;10 minutes;first year medical students

Endocrinology--Examinations, questions, etc.

DRUGS: ADRENAL STEROIDS (kumc43;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson first reviews some diseases of hyper- and hypothyroidism, then discusses the therapeutic use of steroid drugs in their treatment.
none;10 minutes;first year medical students

Introductory materials

GEN. PHARM. PART 2: METABOLISM AND EXCRETION (kumc15;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the ways in which the body stops drug action after the drug has produced its therapeutic effect.
none;10 minutes;first year medical students

GEN. PHARM. PART. 1: ABSORPTION AND DISTRIBUTION (kumc2;1975;unpublished)
Kansas University Medical Center; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois
This lesson treats the common routes of drug administration: oral, intramuscular and intravenous.
none;10 minutes;first year medical students

A LABORATORY EXPERIENCE IN PHARMACOLOGY: DOSAGE SCHEDULING (dose;1977;unpublished)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Science, Univ. of Illinois
This program provides the student with an opportunity to compare absorption rate, volumes of distribution and elimination rates and their effect on plasma levels of several known and theoretical drugs.
none;none;first year medical students

PHARMACODYNAMICS II: DRUG ACTION, METABOLISM AND EXCRETION (pco12;1975;unpubl.)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois
The basic principles of pharmacology are presented and examples emphasizing the clinical relevance of the material are drawn from pertinent literature. Selected case studies are also presented to coordinate basic pharmacological
none;20 minutes;first year medical students

PHARMACODYNAMICS I:DRUG ADMINISTRATION,ADSORPTION,DISTRIB.
(pcoll; 1975;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois

Basic principles of pharmacology are presented and examples emphasizing the clinical relevance of the material are drawn from pertinent literature. Selected case studies are also presented to coordinate basic pharmacological principles with therapeutic applications. This is the first of two introductory lessons in pharmacodynamics.

none;25 minutes;first year medical students

PHARMACOKINETICS II: DOSAGE PROBLEMS (kumc8;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois

This lesson contains exercises designed to give the user the feel of developing dose schedules, based on the material presented in the PLATO lesson "Pharmacokinetics I".

none;20 minutes;first year medical students

PHARMACOKINETICS I: ABSORPT., DISTRIB., METABOL., EXCRET.
(kumc6;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Shoeman, D; et al.
University of Kansas / University of Illinois

This lesson presents material to aid in the design of a dose regimen, which requires the development of an equilibrium among absorption, distribution, metabolism and excretion so as to maximize the desired therapeutic effects and minimize toxic reactions.

none;2 hours;first year medical students

Introductory materials--Problems, exercises, etc.

INTRODUCTORY PHARMACOLOGY: REVIEW (kumc11;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson contains questions designed to test and review material presented in the Kansas University Medical Center introductory pharmacology lessons.

none;25 minutes;first year medical students

Neuropharmacology

AUTONOMIC PHARMACOLOGY I: GENERAL INTRODUCTION AND REVIEW
(kumc3;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Felty, Michael; et al.
University of Kansas / University of Illinois

This lesson discusses general concepts of the autonomic nervous system including synthesis, degradation and effects of the various neurotransmitters. Questions to review the material are included.

none;15 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: ADRENERGIC AGENTS (autotut;1975;unpublished)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
This lesson covers various noradrenergic synaptic processes, including norepinephrine synthesis, granular storage, terminal release and re-uptake, catabolism and receptor interaction. The sequence of questions/information is dependent on student performance. Clinically pertinent information is used to reinforce concepts.
none;30 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: ARTERIAL BLOOD PRESSURE IN THE DOG (kumc12;1975;unpublished)
Kansas University Medical Center; Hody, George; Stull, Richard; et al.
University of Kansas / University of Illinois
This lesson is a brief graphic quiz over various autonomic receptor agonists and antagonists, and their effects on certain cardiovascular parameters in the laboratory.
none;5 minutes;first year medical students

AUTONOMIC PHARMACOLOGY: REVIEW (kumc18;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson is a quiz covering adrenergic and cholinergic related compounds, including stimulants and blocking agents. The questions are oriented toward basic mechanisms of these blocking agents, but draw clinical correlates as well.
none;15 minutes;first year medical students

AUTON. PHARMACOL. II: SYNTH. & BIOTRANSF. OF NEUROTRANS. (kumc4;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson treats the synthesis and degradation of mediators of the autonomic nervous system, including the common synthetic pathway of epinephrine and acetylcholine.
none;10 minutes;first year medical students

AUTON. PHARMACOL.: ADRENERGIC MECHANISMS AND USES (kumc13;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson treats the effects of adrenergic stimulating and blocking agents. The concept of alpha and beta adrenergic receptors is included.
none;10 minutes;first year medical students

AUTON. PHARMACOL.: CHOLINERGIC MECHANISMS & USES (kumc9;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the effects of stimulation and blockade of muscarinic and nicotinic receptors.
none;25 minutes;first year medical students

CNS PHARMACOLOGY: ANALGESIA REVIEW (kumc32;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses morphine-type analgesic agents.
none;15 minutes;first year medical students

CNS PHARMACOLOGY: ANESTHESIA CASE STUDY (kumc38;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
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This lesson presents questions based upon a case history regarding general principles of general anesthesia and clinically pertinent gaseous anesthetics.
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This lesson is a quiz on clinically pertinent anticonvulsant agents.
none;15 minutes;first year medical students

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This lesson is a quiz over general principles of depression and clinically pertinent antidepressant agents.
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University of Kansas / University of Illinois
This lesson covers the general principles of general anesthesia and clinically pertinent gaseous anesthetics.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: SEDATIVES AND HYPNOTICS (kumc19;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the general chemistry and pharmacology of sedative-hypnotics. Those treated are primarily barbiturates, certain anithistamines, chloral hydrate, ethchlorvynol, glutethamide, methaqualone and other clinically pertinent sedative-hypnotic agents.
none;10 minutes;first year medical students

CNS PHARMACOLOGY: STIMULANTS AND HALLUCINOGENS (kumc22;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents material on hallucinogenic agents and central nervous system stimulants.
none;10 minutes;first year medical students

CNS PHARM.: ASPIRIN-TYPE ANALGESICS & ANTI-INFLAM. AGENTS (kumc28;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the analgesic and anti-inflammatory effects of salicylates and other aspirin-type agents.
none;20 minutes;first year medical students

GLAUCOMA (bazzoon;1978;unpublished)
Farney, Thomas L; Lee, Tom Jer-Fu
Southern Illinois University School of Medicine
This lesson consists of eleven sections which allow the student to learn about the anatomy and physiology of glaucoma, selectively review aspects of the disease process, and assess his/her knowledge of relevant autonomic pharmacology.
none;open-ended;first year medical students

LAB. EXPT. IN THE PHARMACOLOGY OF THE AUTO. NERVOUS SYSTEM (labsim;1975;1977)
Stull, Richard; Ahasic, Thomas
School of Basic Medical Sciences, Univ. of Illinois
The student is shown the effects of certain autonomic agents on several aspects of the cardiovascular system in the "anesthetized laboratory dog".

After making the observations, an opportunity is given to apply the information by identifying a unknown compound.
none;25 minutes;medical students

NEUROHUMOR METABOLISM: METAB. PATHS OF PRIMARY NEUROMEDIATOR (nhumor;1975;unpublished)
Stull, Richard; Cohen, Barry
School of Basic Medical Sciences, Univ. of Illinois
The lesson provides information regarding the synthesis and degradation of certain primary chemical mediators of the autonomic and central nervous systems, including dopamine, norepinephrine, epinephrine, serotonin, and acetylcholine. A drill and practice section over various structures and pathways is included.
none;25 minutes;first year medical students

Pediatric pharmacology

INTRODUCTORY PHARMACOLOGY: FETAL PHARMACOLOGY (kumc7;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson on fetal pharmacology discusses the influence of drugs on the neonate's skeletal and cardiac musculature.

none;15 minutes;first year medical students

PEDIATRIC PHARMACOLOGY FOR NURSES (pedspharm;1976;unpublished)
Pugh, Elizabeth J
School of Nursing, University of Illinois

A self-study unit for nurses administering medications to children. This program is designed to be used as a bridge between past knowledge and that which will be necessary for safe practice with children.

none;none;junior level nursing students

Toxicology

CASE HISTORY: EMERG. ADMISSION FROM UNEXPECTED DRUG REACTION (kumc17;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / Univeristy of Illinois

This lesson provides a brief case history presenting a patient with central complications secondary to the ingestion of tranycypromine and d-amphetamine. Following patient stabilization, the case is reviewed and pertinent information is given.

none;10 minutes;first year medical students

CHOLINERGIC DRUGS: A CASE-ORIENTED QUIZ (ucsf1;1976;unpublished)
Burkhalter, Alan; Kornberg, Stephen; Hody, George
University of California / University of Illinois

The objective of this lesson is to give the student the ability to make a diagnosis of a certain type of disorder on the basis of the classic presenting signs and symptoms. Treatment is also discussed.

none;10 minutes;first year medical students

TOXICOLOGY: CASE STUDY I (kumc61;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson presents and discusses two emergency cases of persons suffering severe symptoms after ingesting a toxic dose of medication. The student "assists" in testing for the identification of medication and treating the patient.

none;15 minutes;first year medical students

TOXICOLOGY: CASE STUDY II (kumc63;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
In this lesson the student must diagnose and treat an emergency case patient. The symptoms are provided but there is little help given and for the most part, the student is on his/her own.
none;15 minutes;first year medical students

TOXICOLOGY: GENERAL REVIEW (kumc56;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides the student with review questions dealing with the treatment of drug overdose.
none;20 minutes;first year medical students

TOXICOLOGY: QUIZ (kumc60;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson contains a quiz over toxicology materials found in the PLATO toxicology lessons.
none;15 minutes;first year medical students

Toxicology--Examinations, questions, etc.

TOXICOLOGY: GENERAL REVIEW (kumc56;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides the student with review questions dealing with the treatment of drug overdose.
none;20 minutes;first year medical students

TOXICOLOGY: QUIZ (kumc60;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson contains a quiz over toxicology materials found in the PLATO toxicology lessons.
none;15 minutes;first year medical students

Vitamins

DRUGS: INTRODUCTION TO VITAMINS (kumc54;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson reviews, in question and answer format, the physiological and biochemical functions of vitamins.
none;20 minutes;first year medical students

Vitamins--Examinations, questions, etc.

DRUGS: INTRODUCTION TO VITAMINS (kumc54;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson reviews, in question and answer format, the physiological and biochemical functions of vitamins.
none;20 minutes;first year medical students

Pharmacy--Study and teaching

GENERIC: A TEST OF SKILL IN NAMING DRUGS (generic;1976;unpublished)
Hain, Timothy C; Hunter, R. Scott
Abraham Lincoln Medical School, Univ. of Illinois
This lesson is a competitive drill. The student can choose from a list of 21 types of drugs and is presented with either a generic name and a list of brand names, or a brand name and a list of generic names. The correct answer must be selected from 5 choices. Each drill is timed and scored with about 25 trials.
none;open-ended;medical students

PHARMER: A GAME FOR PHUN WITH PHARMACY (pharmer;1977;unpublished)
Lambert, Randall; Guerra, Charles; Kahn, Kenneth ; et al.
College of Pharmacy, University of Illinois
This lesson is an interterminal game in which students match wits on various aspects of pharmacy. It includes contests concerning generic names of drugs, trade names of drugs, and Latin abbreviations.
none;open-ended;medical students, pharmacy students

Pharmacy--Weights and measures

BASIC METRIC CONVERSIONS (shp12;1974;unpublished)
Mosley, Richard L
Sheppard Air Force Base, Texas
This lesson will teach the student to convert fractions to decimal expression and metric measurements of weight, length and volume to their subdivisions of metric form. The student will also learn to calculate the amount of medication to administer to a patient, given the doctor's order and the amount of medication in each tablet.
none;20-30 minutes;physicians' assistants

MATHEMATICS OF DRUGS AND SOLUTIONS (metapo;1975;1979)
Bitzer, Maryann; Lyman, Elisabeth R; McManus, Bonnie
Mercy Hospital School of Nursing, Urbana, Ill.
After completing the lessons in this unit, the student should be able to recognize the most commonly used units in the metric and apothecary systems of measurement, compute equivalent dosage of medication utilizing the metric and apothecary system of measurement and solve problems related to drugs and solution dosages.
none;none;nursing students

Phase diagrams

MELTING POINTS AND MIXED MELTING POINTS (meltpt;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson discusses melting point determinations as a laboratory technique in organic chemistry. The effect of purity on melting points, phase diagrams and the use of mixed melting points for identification of compounds is shown.
none;17 minutes;college/university students

Phobias

NEUROSIS AND THE TREATMENT OF NEUROSIS (nursing8;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
The goal of this lesson is to understand neurosis and the methods of treating it. The method used is the presentation of materials followed by one or more questions on the material.
none;30-45 minutes;nursing students

Phonetics

CONSONANT SYMBOLS (sound2;1976,1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois
This lesson acquaints the student with the consonant symbols used in the dictionary pronunciation guide.
none;30 minutes;First year college English students

Phosphorus in the body

MACROMINERALS (macmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson presents information about macrominerals, or those minerals required in the human diet in amounts exceeding 100 mg. per day. The macrominerals are calcium, phosphorus, magnesium, potassium, sodium, sulphur and chlorine.
none;25-30 minutes;nutrition students

Photography--Exposure

CAMERA OPERATION (media2;1976;unpublished)
Clegg, Janet T
Iowa State University, Ames, Iowa
The lesson teaches the student how to operate an adjustable camera including setting the aperture and speed of the shutter. The use of a microfiche enables the student to see immediately the photographic results of the aperture and speed choice made for each picture. The PLATO technique saves wasting real film practicing photographing.
slide selector, microfiche;none;college and university students

CAMERA OPERATION II (media3;1975;unpublished)
Clegg, Janet T
Iowa State University, Ames, Iowa
The lesson contains practice problems in adjusting camera aperture and speed in photography. The program requires a microfiche to simulate the results of the picture-taking.
slide selector, microfiche;none;college students in photography

Photons--Problems, exercises, etc.

THE COMPTON EFFECT (compton;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
The program is an exercise showing the Compton effect using animated graphics. The student is allowed to experiment with different photon wavelengths, particle masses and collision angles in order to visualize the effects of the changes.
none;open-ended;students in course on Modern Physics

Photoperiodism

FLOWERING AND PHOTOPERIOD (bota;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanism of flowering in response to light.
none;30-45 minutes;college/university students

Photosynthesis

EXPERIMENTS IN PHOTOSYNTHESIS (photosyn2;1975;1980)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson aids the student in identifying, by various experimental procedures, environmental factors which affect photosynthesis. The student also learns to interpret data obtained from simulated experiments.
none;20 minutes;college/university students

PHOTOSYNTHESIS (photosyn1;1973;1980)
Haney, Alan W; Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson describes the relationship of leaf structure and function, explains the principles of chromatography, identifies the fate of raw materials in photosynthesis and illustrates the varying photosynthetic efficiencies of plants.
none;40 minutes;college/university students

Phototropism

EXPERIMENTS IN PHOTOSYNTHESIS (photosyn2;1975;1980)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson aids the student in identifying, by various experimental procedures, environmental factors which affect photosynthesis. The student also learns to interpret data obtained from simulated experiments.
none;20 minutes;college/university students

FLOWERING AND PHOTOPERIOD (bota;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanism of flowering in response to light.
none;30-45 minutes;college/university students

PLANT GROWTH (botc;1973;unpublished)
Manteuffel, Mary; Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson explains the stages of stigmoid growth curve and evaluates the results of the student growth experiments with corn, beans and peas.
none;20-30 minutes;college/university students

PLANT RESPONSES AND APICAL DOMINANCE (lcyc;1973;unpublished)
Noell, John; Manteuffel, Mary
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanisms of plant responses to light and gravity and describes hormonal control of apical dominance.
none;30-40 minutes;college/university students

Physical education and training

BIOMECHANICS OF RUNNING (pe10;1974;unpublished)
Reece, Robert M; Dillman, Charles J
Physical Education Department, U of I, Urbana, Ill.
This lesson teaches the user to manipulate various parameters which determine the speed at which a sprinter is able to run the 100 meter dash. Background material and definitions are provided.
none;1-2 hours;persons interested in the study of biomechanics

INTRODUCTION TO CROSS-COUNTRY RUNNING (pe9;1974;unpublished)
Reece, Robert M; Dillman, Charles J
Physical Education Department, U of I, Urbana, Ill.
This lesson deals with cross-country running and presents the fundamentals, techniques, rules and types of training for running. The terminology is also discussed.
none;60 minutes;persons interested in cross-country running

PROJECTILE MOTION IN SPORTS SKILLS (pel;1974;unpublished)
Reece, Robert M; Dillman, Charles J
Physical Education Department, U of I, Urbana, Ill.
The purpose of this lesson is to illustrate how the manipulation of selected biomechanical factors of human performance can influence the outcome of various projection activities in sport.
none;60 minutes;persons interested in the study of biomechanics

Physical examination

see Periodic health examination

Physician and patient

OBSTETRICIAN-GYNECOLOGIST AS SEX EDUCATOR (sexed;1978;unpublished)
Lavanhar, Patricia; Pepper, George; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development
This lesson covers six areas of physical diagnosis where the practitioner can be of service to the patient in sex education: attitude, history, physical pelvic exam, etc. The format is highly interactive, involving essay, true/false, short answer and multiple choice questions. A pretest and post-test enable measure of learning.
none;30-45 minutes;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: BACKACHE (feinz7;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 31-year-old moderately obese man who comes in after the sudden onset of backache two days ago. The user is a student physician working for an ambulatory care facility who has been assigned to this man. Choices are made from options provided and each selection is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: CHECKUP (feinz8;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 53-year-old woman who wants a "check-up" after 12 years with another doctor. The user is a student physician working for an ambulatory care facility who has been assigned to this woman. Choices are made from options provided and each selection is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: COUGH (feinz3;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 47-year-old man with a progressively worsening cough and shortness of breath. The user is a student physician working for an ambulatory care facility who has been assigned to this man. Choices are made from options provided and each selection is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: EAR INFECTION (feinz2;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a three-year-old boy who has had a painful left ear and diarrhea. His temperature is normal. The user is a student physician working for an ambulatory care facility who has been assigned to this family. Choices are made from options provided and each selection is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: INDIGESTION (feinz4;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 52-year-old man with a history of established hypertension and the recent onset of indigestion, variably related to meals. The user is a student physician for an ambulatory care facility who has been assigned to this man. Choices are made from options provided and each selection is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: RETURN VISIT (feinz9;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the 43-year-old male patient has been asked to return to the clinic following a routine physical and laboratory tests that yielded a problem list. The user is a student physician working in an ambulatory care facility who has handled this case. Choices are made from options provided and each selection is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: SORE THROAT (feinz1;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is an eight-year-old girl who has had a fever to 104°, sore throat and cough for three days. The user is a student physician working in an ambulatory care facility who has been assigned to this family. Choices are made from options provided and each selection is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: STOMACH TROUBLE (feinz5;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 25-year-old woman with occasional nausea and vomitting. The user is a student physician working for an ambulatory care facility who has been assigned to this woman. Choices are made from options provided and each selction is discussed.
none;none;medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: WEAKNESS (feinz6;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 70-year-old woman who in the last three weeks has gained weight and felt generalized weakness. The user is a student physician working for an ambulatory care facility who has been assigned to this woman. Choices are made from options provided and each selection is discussed.
none;none;medical students

Physicians (General practice)

ADULT ONSET SEIZURES: DIFFERENTIAL DIAGNOSIS (tumor;1978 ;unpublished)
Patterson, Virginia; Nelson, Charles D; Stepanek, David; et al.
Abraham Lincoln Medical School, Univ. of Illinois
In this simulation Andy Workman, a 26-year-old white male, has had a single convulsion and has come into the office for help. The student must do a complete workup, including history, lab, physical, and also treat him in the hospital, using chemotherapy, radiation therapy, or other options.
optional microfiche;35 minutes;medical students

AND EVERYTHING NICE (oventroubl;1977;unpublished)
Arab, Morsi M; Kemp, Larry; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development
In this simulation, a 32-year-old pregnant secretary comes into the office with nausea, fainting and other distress. She is in her seventh month. The student must gather history, physical and lab data, make a diagnosis, prescribe treatment, and manage complications. Clinical knowledge questions are interjected to provide didactic supplement to the problem.
none;25 minutes;medical students

THE CASE OF THE KISSING TELLER (percival;1977;unpublished)
Alora, Angeles; Kemp, Larry; Nelson, Charles D; et al.
U of I Medical School, Cntr. for Ed. Development
In this doctor's office simulation, Percival Snoot has come in complaining of a burning sensation at the tip of his penis. The student takes medical history, physical and lab data, and offers treatment. In addition, the sexual contacts must be followed up and treated for venereal problems of their own.
optional microfiche ;30 minutes;medical students

A PAIN IN THE NECK: HARRY JONES COMPLAINS OF THE FLU (lump;1978;unpublished)
Busse, Joel; Graham, Carol; Nelson, Charles D; et al.
University of Illinois Rockford School of Medicine
In this simulation, Harry Jones complains of flu symptoms and a stiff neck. He is a regular patient usually in good health. The student is required to take a complete medical history, gather lab and physical data, and take x-rays. Faulty procedures in the initial workup cause the patient to leave the office for 3 month delay, causing a worsening condition.
optional microfiche;none;medical students

PHYSICIAN SELF-ASSESSMENT I (psa01;1976;unpublished)
Lackmann, John; Bloomfield, Louis; Kaufman, S.
Abraham Lincoln Medical School, Univ. of Illinois
In this lesson, the patient presents the student with a problem of occipital headaches. The student must make a series of decisions on how to diagnose and treat the problem. Each decision is scored and real data is presented, including clinical pictures through the use of microfiche.
microfiche, optional touch panel;none;medical students

PHYSICIAN SELF-ASSESSMENT II (psa02;1976;unpublished)
Bloomfield, Daniel; Bloomfield, Louis; Lackmann, John
Abraham Lincoln Medical School, Univ. of Illinois
This lesson simulates a doctor's office and the student is presented with the case of Jean Sims, whose mother insists her daughter is ill. Complicating the case is the nurse's intrusion into the treatment with another patient complaining of chest pains. The student must make a series of decisions in diagnosis and treatment.
microfiche, optional touch panel;none;medical students

PHYSICIAN SELF-ASSESSMENT V (psa05;1974;unpublished)
Esterly, N.; Solomon, Lawrence; Chen, Thomas; et al.
Abraham Lincoln School of Medicine, Univ. of Illinois
In this simulation, a 28-year-old woman comes to the doctor complaining of a rash on her hands. The student must diagnose her problem and treat her condition.
microfiche, optional touch panel;none;medical students

PHYSICIAN SELF-ASSESSMENT VIII (psa08;1976;unpublished)
Loeffel, Dorinda; Solomon, Lawrence; Yamada, Mitsuru; et al.
Abraham Lincoln Medical School, Univ. of Illinois
In this doctor's office simulation, a young man comes into the office with severe acne. Several alternative paths are possible, some of which lead to a cure, others to a malpractice suit. Costs are kept and a summary and bibliography follow.
microfiche, optional touch panel;none;medical students

Physicians--Recruiting

MUMBLE BERRY NEEDS A DR.: COMM. ORG. IN MEDICINE (drsearch;1977;unpublished)
Westover, Paul; Nelson, Charles D; Kemp, Larry
University of Colorado / University of Illinois

In this lesson the student is required to make a series of decisions in community organization tactics to recruit a doctor for a small town. The lesson ends with either the recruitment of a doctor or failure to recruit a doctor, depending on the tactics used.

none;none;medical students

Physics
see Physics, Elementary - Classical mechanics

Physics
see Physics, Elementary - Electricity and magnetism

Physics
see Physics, Elementary - Waves, optics and modern physics

Physics
see Physics, Modern - Particles and waves

Physics
see Physics, Modern - Quantum mechanics

Physics, Elementary - Classical mechanics

Dynamics

FORCES AND FREE-BODY DIAGRAMS (cb10;1975;1977)
Bennett, Carol D
Physics Department, Univ. of Illinois, Urbana, Ill.

The lesson introduces typical forces, including tension in a string and friction between surfaces. It treats the concept of a free body and has the student isolate and analyze various kinds of subsystems for the forces.

none;70 minutes;college/university students

PROBLEM-SOLVING LESSON USING NEWTON'S LAWS OF MOTION (freel;1971,1972;1977)
Sherwood, Bruce Arne; Burson, Craig
Physics Department, University of Illinois

This lesson is a problem-solving lesson using Newton's laws of motion. The student is given a careful set of systematic procedures for solving problems of this kind, and then is given several exercises on simple one- and two-body systems. There is a "mastery quiz" at the end of the lesson.

none;80 minutes;college/university students of introductory physics

RING GAME (ring;1974;unpublished)
Bennett, Carol D
Physics Department, University of Illinois
The game consists of attempting to stop the motion of a ring which is moving. Two forces causing the motion are given, and the player must figure out a third force and where it should be applied to arrest the motion of the ring.
none;15 minutes;college/university

General mechanics

INTERTERMINAL PROBLEM SOLVING CONTEST-VECTORS AND KINEMATICS (p106con1;1976;1978)
Smith, James H; Kane, Dennis
Physics Department, University of Illinois
The object of this interterminal problem solving contest is to solve a problem in vectors or kinematics in less time than it takes an opponent to solve it. The players can accept, reject or withdraw challenges while playing. The game is played between players at different terminals.
none;open-ended;students of elementary college physics

PHIZQUIZ: PROB.-SOLVING TEST IN ELEM. MECHANICS (phizquiz1;1973;1977)
Peterson, S Bradley; Smith, James H; Kane, Dennis
Physics Department, University of Illinois
Eight problems are presented to the student drawn from major areas of classical mechanics. The basic situation is described and then the student must "buy" specific information (masses, velocities, etc.). The student is charged for irrelevent information, so that care is required to solve each problem at minimum cost.
none;50 minutes;college/university students of classical mechanics

RELATIVE MOTION: RIVER PROBLEM (river;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
This program contains the age-old relative motion problem of a boat crossing a stream. Two options are given: 1) to move a boat to a dock straight across a river from the starting point; 2) to move a boat to a dock 45° downstream from the starting point. The user can experiment with various values for the speed of the river current.
none;none;anyone

Kinematics

GRAPHICAL KINEMATICS (grafdif;1973,77;1978)
McNeil, E B
Physics Dept., Univ. of Ill. at Chicago Circle
The lesson teaches the connection between the slope of a curve and its derivative, in other words: graphical differentiation. The student makes input by means of a graphics cursor. The immediate feedback provides an advantage over the usual homework problem pencil and paper method of practice and understanding of the subject.
none;2 hours;college and university students

GRAVITATIONAL POTENTIAL ENERGY (gravpot;1978;unpublished)
Beece, Daniel
Dept. of Physics, U of I, Urbana, Ill.
The purpose of this lesson is to provide an introduction to gravitational potential energy. It assumes that the student is familiar with the concepts of force and acceleration, and the Work-Energy equation.
touch panel;none;college/university students

KINEMATICS I (kineml;1970,1972;1977)
Sherwood, Bruce Arne; Peterson, S Bradley; Beece, Daniel
Physics Department, University of Illinois
The lesson presents the basic concepts of position, velocity, acceleration, and time based on the familiar aspects of automobile travel. The lesson includes training in the reading of graphs, and in applying the principles illustrated in the lesson. A mastery quiz is included.
none;40 minutes;college/university students in introductory physics

KINEMATICS II (kinem2;1973,1977;1977)
Sherwood, Bruce Arne; Beece, Daniel
Physics Department, University of Illinois
The lesson presents a simple numerical integration with graphs which leads up to the derivation by the student of the equation $x_f = x_i + v_i t + at^2/2$, the determination of the position of an object given its acceleration. Applications of the concepts and a mastery quiz are included.
none;90 minutes;college/university students in introductory physics

MOTION OF A WHEEL, SLIDING AND ROLLING (cb7;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
This is an exercise on the forces involved in the motion of a wheel which is sliding and rolling. The problem is illustrated with animation.
none;none;students of classical mechanics, elementary physics

PROJECTILE MOUNTAIN GAME AND MORE (physgame;1973;unpublished)
Bennett, Carol D
Physics Department, University of Illinois
There are four games in this program. The Projectile Mountain Game can be played with one or two players. The other games involve target hitting and/or orbit estimation.
none;open-ended;anyone

TWO-DIMENSIONAL KINEMATICS (kinem3;1975;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson introduces and tests the basic concepts of vector displacement, velocity, average velocity, and acceleration. Various applications deal with kicking a football. Circular motion is also treated, including a derivation of the radial acceleration v^2/r. Applications include satellite motion. A mastery quiz ends the lesson.
none;170 minutes;college/university students in introductory physics

Momentum

EXERCISE ON CONSERVATION OF LINEAR MOMENTUM IN COLLISIONS (collide; 1976;unpublished)
Kane, Dennis
Physics Department, Univ. of Illinois, Urbana, IL
The lesson is a drill on the application of the principle of conservation of linear momentum for isolated systems (systems on which no external forces are acting). The system in the drill is a pair of objects on a frictionless surface (e.g. pucks on an air table). The drill may be repeated as often as desired.
none;open-ended;college/university students of classical mechanics

LOCATION OF CENTER OF MASS OF SYSTEM OF PARTICLES (kane;1976;1977)
Kane, Dennis
Physics Department, University of Illinois
In this drill on center of mass determination the student can move a cursor, by pressing arrow keys, to the center of mass of the system presented in the problem. The computer judges the student's solution. A calculator option is provided for the student to use in solving the problem. A different system is presented on each try of the drill.
none;5 minutes for each problem;college/university

MOMENTUM (conserve;1971,1974;1977)
Sherwood, Bruce Arne; Kane, Dennis; Schultz, Charles
Physics Department, University of Illinois
This lesson is on the role of momentum in collisions with emphasis on conservation of momentum for isolated systems. It is expected that the student is familiar with two-dimensional kinematics including velocity and its vector description.
none;45 minutes;college/university students in introductory physics

Rotational dynamics

GYROSCOPE EXPERIMENT - SIMULATION (gyrolab;1973;unpublished)
Bennett, Carol D
Physics Department, University of Illinois
The object of the lesson is to measure the precession of a gyroscope when a torque is applied to one end. The result is compared with theory. This lesson is intended as an introduction to the actual experiment.
none;none;students of classical mechanics, elementary physics

KINETIC ENERGY OF ROTATION AND MOMENT OF INERTIA (rel4;1976;1978)
Kane, Dennis
Physics Department, University of Illinois
The lesson gives the student drill in calculating I and KE for various rotating systems. The introduction contains a review of the principles involved in the calculations.
none;20 minutes;college/university students

PROBLEM-SOLVING LESSON IN CLASSICAL ROT. DYNAMICS (free2;1972,1973;1977)
Sherwood, Bruce Arne; Burson, Craig
Physics Department, University of Illinois
The complication of rotational motion is added to the problems involving dynamics systems in this problem-solving exercise. The student is given the option of examining all the problems to be solved before solving any of them. The lesson includes a mastery quiz.
none;70 minutes;college/university students of introductory physics

RADIAN MEASURE (inertia;1974;unpublished)
Bennett, Carol D; Smith, James H
Physics Department, University of Illinois, Urbana
This elementary classical mechanics lesson discusses radians and degrees, with the intent that the user master the concepts of radian angle measure and $\sin(\theta) \rightarrow \theta$ as $\theta \rightarrow 0$.
none;none;physics students

THE RIGHT HAND RULE: DRILL AND PRACTICE (righthand;1977;1978)
Beece, Daniel
Physics Dept., Univ. of Ill., Urbana, Ill.
The lesson carefully explains the meaning of a vector cross product and shows, with illustration, how to determine the sense of such a cross product. The lessons includes a test with fifteen timed trials and a display showing the recent records made by various individuals during the trials.
touch panel;open-ended;students of elem. electricity and magnetism

ROTATIONAL DYNAMICS (rotdyn;1977;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson gives an overview of the major concepts needed to analyze the motion of objects that rotate. The lesson uses a small amount of calculus.
none;80 minutes;college/university students in introductory physics

TORQUE AND ANGULAR MOMENTUM (torque;1974;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson presents the concepts of torque and angular momentum and includes drills on direction and magnitude of torques applied by a wrench (treatment is mainly two-dimensional). Angular momentum is calculated for a spinning and translating dumbbell. There is also an example of angular momentum conservation.
none;60 minutes;college/university students in introductory physics

TORQUE GAME (torgame;1976;1978)
Bennett, Carol D
Physics Department, University of Illinois
The program consists of three "Olympic" torque games involving balancing masses on a pivoted rod. The exercises in each game are timed with time penalties for errors. The use of a touch panel is optional for playing the games.
touch panel (optional);none;students of classical mechanics

Service programs

INTRODUCTION TO USING PLATO (introduce;1976;1977)
Kane, Dennis
Physics Department, University of Illinois
There are three versions of this "Introductory Lesson for New Students": "introduce", "intrduceb", and "introducec". "introduce" is the version written for new PLATO science students, "introduceb" is a short version for science students, and "introducec" is for non-scientific persons. Each presents the keyboard and its use in typing in answers.
none;25 minutes;college/university students in science courses

Simple harmonic motion

OSCILLATIONS (oscill;1974;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
Basic concepts of amplitude, period and frequency are introduced in this lesson in connection with a calculable anharmonic oscillator (two inclines facing each other). A spring-mass system is treated by analogy with circular motion, and by optional calculus treatment. Also included are experimental simulations and other applications.
none;110 minutes;college/university students of introductory physics

Vectors

A DRILL ON VECTOR BASICS (vectors;1976;1977)
Kane, Dennis
Physics Department, University of Illinois
The drill consists of five exercises involving components, and addition and subtraction of vectors.
none;45 minutes;college/university students in introductory physics

RELATIVE MOTION (relmo;1975;1978)
Bennett, Carol D
Physics Department, University of Illinois
The lesson derives the basic formula for Galilean transformation of velocity between moving coordinates. The student is led interactively through an experimental measurement of the speed of one of two moving objects relative to the other, and then through the theoretical calculation of this speed.
none;15 minutes;students of classical mechanics in elementary physics

THE RIGHT HAND RULE: DRILL AND PRACTICE (righthand;1977;1978)
Beece, Daniel
Physics Dept., Univ. of Ill., Urbana, Ill.
The lesson carefully explains the meaning of a vector cross product and shows, with illustration, how to determine the sense of such a cross product. The lessons includes a test with fifteen timed trials and a display showing the recent records made by various individuals during the trials.
touch panel;open-ended;students of elem. electricity and magnetism

VECTORS (show;1973,1974;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The purpose of this lesson is to give students help in gaining a working understanding of vectors. A review of graphing in x-y coordinates and of sines and cosines is included. A knowledge of vectors and vector notation is extremely important in the study of physics because it provides a compact way to express spatial relationships.
none;50 minutes;college/university students of introductory physics

WORKOUT (workout;1976;unpublished)
Sutton, David C; Sherwood, Bruce Arne
Physics Department, University of Illinois, Urbana
This elementary level classical mechanics lesson presents four different games involving work: Polevault, Steeplechase, Hammerthrow and Sabercross.
touch panel;open-ended;physics students

Work and kinetic energy

STORED ENERGY (work;1977;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson treats the general work-energy equation, including thermal and other internal energies (essentially the first law of thermodynamics, but in a mechanics setting) with emphasis on how the choice of subsystem affects the form of work-energy equation.
touch panel;80 minutes;college/ university

WORK AND KINETIC ENERGY (FOR CONSTANT FORCES) (dz;1975;1978)
Kane, Dennis
Physics Department, University of Illinois
The lesson discusses work and kinetic energy for constant forces. The sections on work and on kinetic energy each begin with a review of the basic concepts involved. The lesson ends with a quiz which must be completed to obtain credit for completing the lesson.
none;70 minutes;college/university

WORK DONE BY POSITION-DEPENDENT FORCES (kane1;1975;1977)
Kane, Dennis
Physics Department, University of Illinois
The work done by position-dependent forces is presented in this lesson. The work done by step function forces is explained and illustrated. The student divides a force-distance curve into successively smaller steps to approach an integral. Applications shown include work done by a spring.
none;20 minutes;college/university students in introductory physics

WORKOUT (workout;1976;unpublished)
Sutton, David C; Sherwood, Bruce Arne
Physics Department, University of Illinois, Urbana
This elementary level classical mechanics lesson presents four different games involving work: Polevault, Steeplechase, Hammerthrow and Sabercross.
touch panel;open-ended;physics students

--Problems, exercises, etc.

KINETIC ENERGY OF ROTATION AND MOMENT OF INERTIA (rel4;1976;1978)
Kane, Dennis
Physics Department, University of Illinois
The lesson gives the student drill in calculating I and KE for various rotating systems. The introduction contains a review of the principles involved in the calculations.
none;20 minutes;college/university students

MOTION OF A WHEEL, SLIDING AND ROLLING (cb7;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
This is an exercise on the forces involved in the motion of a wheel which is sliding and rolling. The problem is illustrated with animation.
none;none;students of classical mechanics, elementary physics

PROBLEM SETS FOR CLASSICAL MECHANICS (mechhw1;1974,1977;1978)
Smith, James H; Kane, Dennis; Sherwood, Bruce Arne; et al.
Physics Department, University of Illinois
This is a series of homework problem sets for use with a physics course in classical mechanics. The student is not considered to be finished with each set until he has mastered each problem. Each problem is scored and retrials of the problems may improve the original score. Lesson names for the series are "mechhw1-mechhw18".
none;100 minutes per set, 23 hours total;college/university students

PROBLEM-SOLVING LESSON IN CLASSICAL ROT. DYNAMICS (free2;1972,1973;1977)
Sherwood, Bruce Arne; Burson, Craig
Physics Department, University of Illinois
The complication of rotational motion is added to the problems involving dynamics systems in this problem-solving exercise. The student is given the option of examining all the problems to be solved before solving any of them. The lesson includes a mastery quiz.
none;70 minutes;college/university students of introductory physics

PROBLEM-SOLVING LESSON USING NEWTON'S LAWS OF MOTION (free1;1971,1972;1977)
Sherwood, Bruce Arne; Burson, Craig
Physics Department, University of Illinois
This lesson is a problem-solving lesson using Newton's laws of motion. The student is given a careful set of systematic procedures for solving problems of this kind, and then is given several exercises on simple one- and two-body systems. There is a "mastery quiz" at the end of the lesson.
none;80 minutes;college/university students of introductory physics

RELATIVE MOTION: RIVER PROBLEM (river;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
This program contains the age-old relative motion problem of a boat crossing a stream. Two options are given: 1) to move a boat to a dock straight across a river from the starting point; 2) to move a boat to a dock 45° downstream from the starting point. The user can experiment with various values for the speed of the river current.
none;none;anyone

ORBITS (orbits2;1974;unpublished)
Bennett, Carol D; Kane, Dennis
Physics Department, University of Illinois, Urbana
The lesson presents two-dimensional orbit equations and numerical two-dimensional kinematics. Vectors are defined and their proper notation discussed, as well as gravitational acceleration. The procedures are explained and the equations can be plotted.
none;none;physics students

ORBITS PLOTTER (orbits;19/4;unpublished)

Bennett, Carol D; Kane, Dennis

Physics Department, University of Illinois, Urbana

The program plots satellite orbits for one or two force centers (earths). The student is guided through a sample case, then given a list of options for changing parameters or setting up a new system.

none;none;physics students

Physics, Elementary - Electricity and magnetism

CURRENT SIMULATIONS: CURRENT VS. TIME (circuits;1973;1978)

Bennett, Carol D

Physics Dept., Univ. of Ill., Urbana IL

The lesson studies the relationship of current values to time in an electrical circuit. The student chooses values for the components of a circuit and PLATO plots current vs. time as found by numerical integration of the circuit equation.

none;none;students of elementary electricity and magnetism

Physics, Elementary - Waves, optics and modern physics

E-M radiation and physical optics

PHASORS (VECTOR) DIAGRAMS (phasors;1973;1978)

Bennett, Carol D

Physics Department, University of Illinois

The program illustrates the technique of constructing interference patterns from addition of electric field vectors. HELP is available and a quiz, which can be taken at any time, completes the lesson.

none;none;students of modern elementary physics

POLARIZERS -- FILTERS OF COHERENT ELECTROMAGNETIC RADIATION (polarize;1973;unpublished)

Bennett, Carol D

Physics Department, University of Illinois

The lesson provides a tool for working problems having to do with polarizers. A review of the properties of polarizers is presented and then the student is asked to do several exercises based on these properties. A template is given with help for working problems on 1 to 3 polarizers.

none;none;students of elementary physics

Geometrical optics

EXERCISE WITH TWO PLANE MIRRORS (mirrors1;1974;1978)

Bennett, Carol D

Physics Department, University of Illinois

Exercises are provided in locating the images of a given object produced by two perpendicular plane mirrors when the location of the images are found and marked. The appropriate rays are drawn on the PLATO screen. A HELP section contains a sample illustration.

none;none;students studying optics in elementary physics

GEOMETRIC OPTICS - THIN LENS EXERCISES (lenses;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois

Graphical exercises are presented in drawing the principal rays for a concave and a convex thin lens. Calculation of the image positions is also part of the exercises.

none;none;students in elementary physics

SIGN CONVENTIONS FOR MIRRORS, LENSES, REFRACTING SURFACES (optics1;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

In this lesson the student is shown various optical elements with an object and an image in varying positions. The exercises randomly generate a lens, mirror, or curved surface, draw the principal rays, and ask for the magnitude and signs of the focal length, object and image positions, and radius of curvature. The HELP section contains the "set of rules".

none;none;students of optics in elementary physics

Wave phenomena

TRAVELING WAVE EXERCISES AND QUIZ (waves1;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

This lesson on waves presents exercises on identifying the properties of a traveling wave by its functional form y(x,t). There is a quiz at the end of the exercises, the completion of which is required for credit for the lesson.

none;none;students of elementary and intermediate physics

VIBRATING STRING EXPERIMENT AND EXERCISES (string;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

The lesson describes the vibrating string experiment and presents a simulation of an experiment in finding the wavelength of standing waves.

none;none;students of elementary modern physics

Physics, Modern - Particles and waves

THE COMPTON EFFECT (compton;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

The program is an exercise showing the Compton effect using animated graphics. The student is allowed to experiment with different photon wavelengths, particle masses and collision angles in order to visualize the effects of the changes.

none;open-ended;students in course on Modern Physics

Physics, Modern - Quantum mechanics

ALPHA AND BETA DECAY AND Q (ENERGY) OF REACTION (cb6;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois
The lesson contains exercises for the student in which a nucleus is selected and from the nuclear mass data a determination can be made as to whether the nucleus can alpha-decay or beta-decay. The energy (Q) of the reaction can also be found.
none;none;students of elementary modern physics

THE HEISENBERG UNCERTAINTY PRINCIPLE (heisenberg;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
The lesson gives practice in exercises on wave packets and the Heisenberg Uncertainty Principle. Definitions, notation, comments and hints for the exercises and subsequent analysis are included.
none;none;college/university students

INFINITE SQUARE-WELL POTENTIAL (infinite;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
The lesson presents the properties of infinite square-well wave functions and energies. Graphical representations illustrate the explanations.
none;none;college/university students of modern physics

NUCLEAR DECAY PROCESSES (decay;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois
The program is one which by means of animated graphics allows the student to study nuclear decay processes.The determination of the half-life of processes is an end result.
none;none;students of elementary modern physics

PARTIAL DIFFERENTIATION AND THE WAVE EQUATION (waveqn;1973;1978)
Bennett, Carol D
Physics Department, Universtiy of Illinois
The lesson contains exercises on solutions of the "wave equation" by partial differentiation. After the student has finished the exercises, he/she must complete a quiz of three problems in order to obtain credit for completing the lesson.
none;none;students of modern physics or quantum mechanics

QUANTUM NUMBERS IN ATOMIC PHYSICS (atomic;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

The lesson explains the quantum numbers associated with wave functions and gives the rules pertaining to the quantum numbers. A timed drill and practice set of exercises in identification of the n,l,m atomic quantum numbers for a given system completes the lesson.

none;none;students of modern physics and quantum mechanics

Physics - Index

INDEX TO PHYSICS LESSONS (physics;1973;unpublished)
Sherwood, Bruce Arne; Kane, Dennis
Physics Department, University of Illinois

The Index of Physics Lessons compiled at the University of Illinois contains access to lessons written by University of Illinois personnel as well as by some persons at remote sites on the U of I PLATO system. Lessons may also be found individually through the title and subject index of the catalog.

none;none;none

Physics--Examinations, questions, etc.

PHIZQUIZ: PROB.-SOLVING TEST IN ELEM. MECHANICS (phizquiz1;1973;1977)
Peterson, S Bradley; Smith, James H; Kane, Dennis
Physics Department, University of Illinois

Eight problems are presented to the student drawn from major areas of classical mechanics. The basic situation is described and then the student must "buy" specific information (masses, velocities, etc.). The student is charged for irrelevent information, so that care is required to solve each problem at minimum cost.

none;50 minutes;college/university students of classical mechanics

Physics--General service programs

ERROR ESTIMATES IN ARITHMETIC OPERATIONS (cb9;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois

This lesson illustrates errors in arithmetic operations. It defines types of error, gives exercises in determining the accumulated error in numbers (a+b), (a-b), (a×b), (a÷b) and describes the difference between correlated and uncorrelated errors. The order of study of each type of error is optional.

none;none;anyone involved in accurate arithmetic measurements

GRAFIT PROGRAMMING FACILITY (grafit;1971;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois

GRAFIT is a programmable calculator which graphs the results. The program provides a simple programming language with inherent graphical output, designed to assist science students to compute and graph results for small calculations. The program is a general service type program, not a lesson.

none;open-ended;college/university science students

MINI-CALCULATOR (calca;1975;1978)
Bennett, Carol D
Physics Department, University of Illinois

The program is a utility program providing a small calculator without user-defined functions; it includes real or complex numbers, random numbers, and array operations.

none;open-ended;students in mathematics, physics, and other sciences

NUMERICAL ANALYSIS UTILITY (calc;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

This is a utility program to aid in numerical analysis. The program provides an elaborate calculator and x-y function plotter with user-defined functions A-Z and variables a-z.

none;open-ended;students of mathematics and physics

USE OF FOURIER SERIES (ph108e;1976;1978)
Bennett, Carol D
Physics Department, University of Illinois

The program is one to illustrate and give practice to the student in the use of Fourier series. Both Fourier analysis and Fourier synthesis techniques are given. The HELP display contains sections on sample functions, special symbols, Boolean values and advice on how to enter points.

none;open-ended;university students with math. background

Physics--Problems, exercises, etc.

KINETIC ENERGY OF ROTATION AND MOMENT OF INERTIA (re14;1976;1978)
Kane, Dennis
Physics Department, University of Illinois

The lesson gives the student drill in calculating I and KE for various rotating systems. The introduction contains a review of the principles involved in the calculations.

none;20 minutes;college/university students

Physiology

Anatomy

ELECTROCARDIOGRAPHY (ekg0;1974;1978)
Smetzer, David L; Koehn, Charles E
College of Veterinary Medicine, University of Illinois

The lesson describes by animated graphics the sequence of spread of electrical activity through the normal heart and relates the spread of electrical activity to the genesis of the electrocardiogram. The lesson is non-interactive ss far as the student is concerned.

none;one hour;students of veterinary medicine

THE HUMAN DIGESTIVE SYSTEM (digestion;1975;1977)
Boggs, Stephen H
University of Illinois, Urbana, Illinois

The lesson teaches the major organs and structures of the human digestive system, the locations of each and the function each performs.

none;50 minutes;college/university students in biology or physiology

Blood

BLOOD COAGULATION II: INTRINSIC AND EXTRINSIC COAG. MECH. (bcoag2;1976;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the University of Illinois

This lesson takes the student through the blood coagulation mechanism step-by-step, factor-by-factor. Included are a description of both the intrinsic and extrinsic coagulation mechanisms, and a discussion of of the role of platelets. A quiz on the entire lesson and drills on the various parts are included.

none;15 minutes;first year medical students

BLOOD COAGULATION I: PLATELETS & CELLULAR ELEMENTS (bcoag3;1977;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the University of Illinois

This lesson provides an introduction to the cellular elements of blood coagulation with heavy emphasis on platelets and platelet function.

none;none;first year medical students

Cardiology

THE CARDIAC CYCLE PT. II: PHYS. PARAM. OF THE CARDIAC CYCLE (heartcycl2;1975;unpublished)
Frasher, Wallace G; Rikel, James E
University of Southern California

This lesson continues the discussion begun in part one of "The Cardiac Cycle" with emphasis on the physical parameters of the cycle.

none;15 minutes;first year medical students

THE CARDIAC CYCLE PT. I: DIR. OF FLOW & BASIC CARD. ANATOMY (heartcycl1;1975;unpublished)
Frasher, Wallace G; Rikel, James E
University of Southern California
This lesson discusses the relationship of the mechanical functions performed by the heart to the sequential events of the cardiac cycle and blood propulsion. The student should be able, upon completion, to reproduce the cardiac cycle diagram, and recall and properly locate any anatomical structure mentioned in this lesson.
none;15 minutes;first year medical students

INTERPRETATION OF EKG (cardiol;1977;unpublished)
Flanders, Samuel J
Peoria School of Medicine, University of Illinois
In this lesson the student is given a basic introduction to the use of electrocardiograms in physical diagnosis, including how they are made and how to read them.
none;none;first year medical students

INTRO. TO THE ELECTRICAL ACTIVITY OF MYOCARDIAL TISSUE: EKG (elcardio;1976;unpublished)
Frasher, Wallace G; Rikel, James E
University of Southern California
This lesson discusses how cellular events combine in the heart to produce a regulated sequence of muscular contractions and how electrical activity in the excitation process produces a signal at the surface of the body which permits recording and electrocardiogram.
none;15 minutes;first year medical students

Nephrology

INTRODUCTION TO RENAL FUNCTION (kidney;1976;unpublished)
Rikel, James E; Cohen, Paul
University of Southern California
This lesson provides introductory information and diagrams about the kidney and renal function.
none;15 minutes;first year medical students

PHYSIOLOGY OF ADH (ANTIDIURETIC HORMONE) (physadh;1978;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the Univ. of Illinois
This lesson discusses the synthesis, release and action of the antidiuretic hormone.
none;20 minutes;first year medical students

RENAL PHYSIOLOGY - BODY FLUIDS IV: FLUID COMPARTMENT MECH.
(bfcom3;1978;unpublished)
McCraw, Gordon W; Lawrance, David P; Sommers, Jack M; et al.
Oklahoma University Health Sciences Center
This lesson presents a description of the fluid inputs and outputs of the body, including a description of the body's fluid compartments, with an associated fluid input/output chart for student practice and a post test for adequate feedback.
none;15 minutes;first year medical school

RENAL PHYSIOLOGY - BODY FLUIDS PART II: FLUID COMPARTMENTS
(bfcom1;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
In this lesson the student will become familiar with total body water, extracellular, interstitial and intracellular fluids, and lean body mass.
none;15 minutes;first year medical students

RENAL PHYSIOLOGY - BODY FLUIDS PART I: OSMOTIC FORCES (bfcom4;1976;unpublished)
McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
In this lesson the student is presented with the material that must be mastered prior to studying renal physiology. Under the heading of osmotic forces, solute concentration, osmolality, the components of plasma and the significance of the anion gap are the subjects discussed.
none;20 minutes;first year medical students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART I
(bbcarle4a;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This is the first of a lesson series on renal function and laboratory evaluation and provides students with a basic understanding of renal physiology and function.
none;none;1st year med. and med. tech. students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART II
(bbcarle4;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This is second in a series of three lessons, and familiarizes the student with the laboratory tests used in urinalysis, the evaluation of renal function and the principles behind these tests.
none;none;1st year med. and med. tech. students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART III
(bbcarle4c;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson provides the quiz over the first two parts of this series and offers the student a chance for self-assessment over renal function and laboratory evaluation.
none;none;1st year med. and med. tech. students

Nervous system

ACTION POTENTIALS OF SINGLE NERVE FIBERS (actpot;1976;unpublished)
Woods, James; Giles, Steven; Cohen, Paul
Oklahoma University Health Sciences Center
This lesson reviews some basic topics on the physiology of neurons and considers the theoretical background of action potentials in single nerve fibers.
none;15 minutes;first year medical students

NEURON STRUCTURES AND FUNCTION (neurons;1976;1977)
Boggs, Stephen H
CERL, University of Illinois
The lesson presents information on neuron structures, action potentials, a threshold experiment, the synapse, and on integration.
none;38 minutes;college/university students

NEUROPHYSIOLOGY LABORATORY (actpot2;1977;unpublished)
Woods, James; Lawrance, David P; McCraw, Gordon W; et al.
University of Oklahoma / University of Illinois
This lesson is designed for the student of electrophysiology. A simulation of typical electrophysiologic laboratory procedures and concepts such as graded stimuli, spatial summation and temporal summation are presented.
none;open-ended;first year medical or graduate students

NEUROPHYSIOLOGY REVIEW (kumc39;1975;unpublished)
Felty, Michael; Cohen, Barry; Stull, Richard; et al.
University of Kansas / University of Illinois
This lesson provides a review and test for the materials covered in PLATO neurophysiology lessons.
none;open-ended;first year medical students

SKELETAL MUSCLE PHYSIOLOGY, PART I (averager;1978;unpublished)
Schooley, Ralph E; Denault, John M; Collins, Thomas J
Department of Biophysics, University of Illinois
This lesson is designed to introduce the student to the fundamentals of skeletal muscle physiology at the molecular level and to acquaint the student with the response of skeletal muscle stimulation.
none;none;first year medical students

SKELETAL MUSCLE PHYSIOLOGY, PART II (neuron2;1978;unpublished)
Schooley, Ralph E; Cooper, Kim; Collins, Thomas J
School of Basic Medical Sciences, Univ. of Illinois
This lesson is designed to acquaint the student with the response of skeletal muscle to stimulation. Emphasis is placed on isometric and isotonic contractions and relation between stimulus and response. Tension-length curves, force-velocity curves and power-load curves are discussed.
none;45 minutes;first year medical students

SKELETAL MUSCLE PHYSIOLOGY - COMPREHENSIVE QUIZ (ral;1978;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois
This lesson is designed to quiz the student over the fundamentals of skeletal muscle physiology at the molecular level as well as over the response of skeletal muscle to external stimulation.
none;30 minutes;first year medical students

Piano

Instruction and study

KEYBOARD DRILL (musgame3;1976;1977)
Nakada, Mark W; Kraatz, James M
School of Music, University of Illinois
This drill is intended to aid beginning piano students in learning how to (1) read the music staff and (2) identify the corresponding note on the piano.
none;none;none

Placenta--Abnormalities and deformities

PLACENTAL TRANSFER AND FETAL PHARMACOLOGY (mnurse7;1975;1978)
Bitzer, Maryann; Boudreaux, Martha; Bitzer, Donald
Mercy Hospital School of Nursing, Urbana, Ill.
This lesson illustrates the importance of placental transfer of drugs and disease from mother to fetus, and gives an overview of some present day findings.
none;none;nursing students

Plant cells and tissues

INTRODUCTION TO WATER RELATIONS (botwat;1975;unpublished)
Silvius, John
Botany Dept., U of I, Urbana, Ill.
This lesson discusses the factors that influence the direction of water movement across membranes.
none;15 minutes;college/university students

ORGANIZATION OF THE HIGHER PLANT (morpho;1976;unpublished)
Haney, Alan W; May, Gary N
Botany Department, U of I, Urbana, Illinois
This lesson explains how each plant organ is specialized for its particular function.
microfiche;45 minutes;college/university students

WATER RELATIONS LABORATORY (botwat2;1975;unpublished)
Silvius, John
Botany Dept., U of I, Urbana, Ill.
In this lesson the student learns a method for determining the water potential of living cells and learns to describe the conditions which affect transpiration by manipulating a potometer.
none;40 minutes;college/university students

Plant diseases--Identification

PLANT PATHOLOGY: AN INTRO. TO DISEASE AND KOCH'S POSTULATES (pathos;1974;unpublished)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
In this lesson the student will learn to formulate a procedure for identifying the pathogen causing a disease and to calculate the dilution factor for making soil cultures.
microfiche;40 minutes;college/university students

Plant genetics

ENZYME-HORMONE INTERACTIONS (botony;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson helps the student to understand the relationship of enzymes and hormones, to determine the effect of IAA and GA on the growth form of Alaska and Dwarf peas, and to find the specific activity of IAA oxidase.
none;20-40 minutes;college/university students

PLANT GENETICS PROBLEMS (genprob;1973;unpublished)
Noell, John; May, Gary N; Haney, Alan W; et al.
Botany Dept., U of I, Urbana, Ill.
This lesson aids the student in determining the genetic composition of parents from progeny, when one or two traits are involved.
none;20 minutes;college/university students

Plant pigments

PHOTOSYNTHESIS (photosyn1;1973;1980)
Haney, Alan W; Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson describes the relationship of leaf structure and function, explains the principles of chromatography, identifies the fate of raw materials in photosynthesis and illustrates the varying photosynthetic efficiencies of plants.
none;40 minutes;college/university students

Plant regulators

ENZYME-HORMONE INTERACTIONS (botony;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson helps the student to understand the relationship of enzymes and hormones, to determine the effect of IAA and GA on the growth form of Alaska and Dwarf peas, and to find the specific activity of IAA oxidase.
none;20-40 minutes;college/university students

Plants

ORGANIZATION OF THE HIGHER PLANT (morpho;1976;unpublished)
Haney, Alan W; May, Gary N
Botany Department, U of I, Urbana, Illinois
This lesson explains how each plant organ is specialized for its particular function.
microfiche;45 minutes;college/university students

PLANT LIFE CYCLES (cycles;1974;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson constructs a diagram of a generalized plant life cycle, discusses the relationship between gametophyte and sporophyte generations and illustrates how this relationship differs throughout the plant kingdom, with special emphasis on its evolutionary significance.
microfiche;90 minutes;college/university students

Plants, Effect of light on

EXPERIMENTS IN PHOTOSYNTHESIS (photosyn2;1975;1980)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson aids the student in identifying, by various experimental procedures, environmental factors which affect photosynthesis. The student also learns to interpret data obtained from simulated experiments.
none;20 minutes;college/university students

FLOWERING AND PHOTOPERIOD (bota;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanism of flowering in response to light.
none;30-45 minutes;college/university students

PLANT GROWTH (botc;1973;unpublished)
Manteuffel, Mary; Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson explains the stages of stigmoid growth curve and evaluates the results of the student growth experiments with corn, beans and peas.
none;20-30 minutes;college/university students

PLANT RESPONSES AND APICAL DOMINANCE (lcyc;1973;unpublished)
Noell, John; Manteuffel, Mary
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanisms of plant responses to light and gravity and describes hormonal control of apical dominance.
none;30-40 minutes;college/university students

Plants, Flowering of

FLOWERING AND PHOTOPERIOD (bota;1973;unpublished)
Noell, John
Botany Dept., U of I, Urbana, Ill.
This lesson explains the mechanism of flowering in response to light.
none;30-45 minutes;college/university students

Plants--Identification

PLANT TAXONOMY (taxonl;1975;unpublished)
Haney, Alan W
Botany Dept., U of I, Urbana, Ill.
This lesson teaches the student to use a taxonomic key and to recognize plant characteristics commonly used in vegetative keys.
microfiche;45 minutes;college/university students

Plants--Respiration

EXPERIMENTS IN RESPIRATION (respirl;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson explains the dependence of mitochondrial activity and enzyme activity on temperature. The student also designs an experiment to determine optimum temperature for activity.
none;30 minutes;college/university students

RESPIRATION AND ENZYMES (respir;1975;1980)
Silvius, John; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the general scheme of glycolysis, Krebs cycle and electron transport. It also helps the student to understand the relationship of glycolysis to aerobic respiration.
none;45 minutes;college/university students

Plants--Transpiration

WATER RELATIONS LABORATORY (botwat2;1975;unpublished)
Silvius, John
Botany Dept., U of I, Urbana, Ill.
In this lesson the student learns a method for determining the water potential of living cells and learns to describe the conditions which affect transpiration by manipulating a potometer.
none;40 minutes;college/university students

Plant-water relationships

INTRODUCTION TO WATER RELATIONS (botwat;1975;unpublished)
Silvius, John
Botany Dept., U of I, Urbana, Ill.
This lesson discusses the factors that influence the direction of water movement across membranes.
none;15 minutes;college/university students

WATER RELATIONS LABORATORY (botwat2;1975;unpublished)
Silvius, John
Botany Dept., U of I, Urbana, Ill.
In this lesson the student learns a method for determining the water potential of living cells and learns to describe the conditions which affect transpiration by manipulating a potometer.
none;40 minutes;college/university students

Plate tectonics

NEW GLOBAL TECTONICS AND CONTINENTAL DRIFT (earth;1975;unpublished)
Scotese, Christopher
University of Illinois Circle Campus, Chicago, Ill.
This lesson presents a unifying, working hypothesis called plate tectonics, which provides a kinematic model of the upper layer of the earth. It can be used to make quantitative predictions about most phenomena studied by the different disciplines of the earth sciences.
none;open-ended;students of earth sciences

PLATO

Articles (PLATO)

ARTICLES ABOUT THE PLATO SYSTEM (articles;1976;1977)
Lyman, Elisabeth R
Comp.-based Educ. Res. Lab., University of Illinois
This program is a bibliography of articles on the PLATO system and related subjects arranged for viewing alphabetically by author, by broad subject headings or chronologically by date of publication.
none;open-ended;everyone

Calculators

A BETTER TERM CALCULATOR (termcalc;1979;1980)
Marquart, David; Hanes, Larry
Dept. of Elec. Engineering, Univ. of Illinois
This program provides an extended version of the TERM-calc calculator available on the PLATO system. The details of its functions are described and the calculator can be attached the the user's own lesson.
none;open-ended;PLATO lesson authors

EXTENDED TERM-CALC CALCULATOR (calculator; 1978;unpublished)
Eastom, Mark
Purdue Univ. at Fort Wayne, Ft. Wayne, Indiana

This program is an extension of the TERM-calc type calculator available on the PLATO system. It allows both binary and hexadecimal entries. Displays are available in both integer and floating point forms of binary, octal, hexadecimal and "hidden" formats.

none;open-ended;PLATO system authors

Curricular materials

PLATO CURRICULAR MATERIALS (topics;1977;1976)
Lyman, Elisabeth R
Comp.-based Educ. Res. Lab., University of Illinois

The program provides information on completed lessons which have been used in actual instructional situations and which were written for the University of Illinois PLATO IV System.

none;open-ended;general

Keyboard

BRIEF INTRODUCTION TO THE PLATO KEYBOARD (keyboard;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois

The program gives a brief introduction to the PLATO keyset, with explanations of and some interactions with essential keys.

none;10 minutes;anyone

INTRODUCTION TO PLATO (che3;1977;unpublished)
Eckert, Charles A; Oberle, Timothy T
Dept. of Chemical Engineering, U of I, Urbana

This lesson provides information about the PLATO keyset and special, very helpful functions available to the student on PLATO.

none;none;general

INTRODUCTION TO PLATO IN SIMPLE ENGLISH (eslhelp1;1976;unpublished)
Stock, Roberta; Eisenberg, John D
Division of English as a Second Language, U. of I.

This simple help lesson is a special lesson which has been written for foreign students using the PLATO system to study English. It explains to the student in very elementary English with simplistic explanations how to use PLATO, how to use the keyboard, how to make capital letters, how to punctuate, etc.

none;ability dependent;foreign students improving their English

INTRODUCTION TO PLATO-IV (accintro;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
General instructions in the use of PLATO with specifics applying to accountancy are contained in this lesson.
none;20-30 minutes;accountancy students

INTRODUCTION TO USING PLATO (introduce;1976;1977)
Kane, Dennis
Physics Department, University of Illinois
There are three versions of this "Introductory Lesson for New Students": "introduce", "intrduceb", and "introducec". "introduce" is the version written for new PLATO science students, "introduceb" is a short version for science students, and "introducec" is for non-scientific persons. Each presents the keyboard and its use in typing in answers.
none;25 minutes;college/university students in science courses

PLATO AND YOU (zpstories;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Whole Numbers Elem. Math. Group
The lesson explains how PLATO communicates with the student. It teaches the student to differentiate between the roles of the computer and the programmer.
none;four ten minute segments;upper level elementary students

TALKING TO PLATO (intro;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
The lesson is an interactive introduction to the use of PLATO by a student. It illustrates in detail the NEXT, BACK, EDIT, ERASE and some special keys for symbols like π, °, superscripts and subscripts.
none;10 minutes;any user of PLATO

WELCOME TO PLATO (nurseintro;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.
The lesson is a short introduction to PLATO for nursing students. Included are instructions for signing on to a terminal, operating the PLATO keyset and touch panel, and using the various function keys such as NEXT, HELP, ERASE, DATA, etc.. A few added features of special use to nursing students, such as the "dictionary", are also described.
touch panel slide selector, microfiche;20 minutes;nursing students

Opinion survey

OPINION SURVEY AND ANALYSIS PACKAGE (opinion;1976;1977)
Siegel, Martin A
Comp.-based Educ. Res. Lab., University of Illinois
Detailed instructions are given the user of the PLATO Opinion Survey as to how to administer an opinion survey and analyze the results.
none;open-ended;PLATO teachers

PLATO IV System

COMPUTER, AN INTRO. TO COMPUTERS, CAI, PLATO FOR NEW AUTHORS (computer;1973;unpublished)
Goldstein, Merle
University of Illinois
This lesson discusses a computer system, some common computer terms, computer-assisted instruction and the nature of the PLATO IV system.
none;open-ended;general

Programmable terminal programs

STARFIGHT (starfight;1977;1978)
Anderer, David G; Laubach, Mark
PLATO Project, University of Delaware, Newark, Del.
The game, "starfight", must be played on a programmable PLATO terminal. It involves two ships, the Glassors and the Errows. Each ship can fire torpedos at each other. The first player to get 7 kills wins. The players manipulate the directions of their ships as well as the detonation of the torpedos by keys on the keyset.
programmable plato terminal required;open-ended;any age

Programming language (TUTOR)

INTRODUCTION TO THE TUTOR LANGUAGE (introtutor;1973;1977)
Ghesquiere, James R; Davis, Celia; Thompson, Charlene
Comp.-based Educ. Res. Lab., University of Illinois
This is an introduction to the TUTOR language giving elementary exercises as an introduction to the teacher/author. The lesson is to be used in conjunction with the manual, "Introduction to TUTOR".
none;2 hours;general

Student bulletin board

ON-LINE STUDENT BULLETIN BOARD (bulletin;1975;1977)
Friedman, H. George
Department of Computer Science, University of Illinois
Instructions are given as well as a program for setting up an on-line student bulletin board for use with student courses.
none;none;students in a PLATO course

PLATO

Touch panel

INTRODUCTION TO THE PLATO TOUCH PANEL (touchp;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
This is a short descriptive program explaining the PLATO touch panel and giving a student practice in using it.
touch panel;5 minutes;anyone

PLATO "group" records

ON-PAGE GROUP-USAGE MONITOR (groupop;1979;unpublished)
Syfrig, Nathan F
Indiana University
This lesson enables a user to get a constant update on usage of a group. It includes management options (message and sign-off), detailed information on an individual, and connections to the lesson by other utilities.
none;open-ended;group directors or group-editor package designers

Pleura

FUNCTIONAL MECHANICS OF VENTILATION (shp30;1974;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson dicusses the muscular-skeletal interaction in ventilation, the basic embryological development of the pleural cavity, respiratory pressures, pulmonary volumes and capacities, and alveolar ventilation.
none;4 1/2 hours;physicians' assistants

Plotters, XY

see XY plotters

PL/I (Computer program language)

DATA STRUCTURES: AN INTRODUCTION FOR PL/I (pl1struct;1975;1978)
Benveniste, Michael; Friedman, H. George
Comp. Sci. Dept., ACSES Project, Univ. of Ill.
The lesson is on both data structures and PL/I. The concepts presented can be used in many languages including COBOL, PASCAL, and ALGOL. However, because the lesson is designed primarily for other PL/I lessons, the drills and program segments, as well as the examples, are in PL/I.
none;25 hours for series;college/comm. or jr. college

DRILLS IN PL/I INPUT/OUTPUT STATEMENTS (pl1editdrl;1975;1978)
Sallinger, Robert; Tobias, Robert S
Computer Science Dept., ACSES Project, U of I
The lesson is another in the series on the programming language, PL/I. It contains drills on EDIT-directed input/output suitable for use in conjunction with lesson "pl1edit". Students with minimal background in PL/I should be able to gain some degree of proficiency in handling input/output statements after working through the drills.
none;25 hours for series;college/comm. or jr. college

INTRODUCTION TO THE PL/I SEQUENCE (pl1intro;1975;1978)

Friedman, H. George
Dept. of Comp. Sci., ADSES project, Univ. of Ill.

This lesson is an introductory lesson which discusses the objectives of the PL/I sequence of lessons and describes each individual lesson. It also contains a section on the current status of the sequence and outlines plans for the improvement of the sequence.

none;25 hours for series;college/jr. college

PL/I ARITHMETIC (pl1arith;1975;1978)

LeSturgeon, Dan; Mittelstadt, Mike; McKeown, Dave; et al.
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.

The lesson discusses arithmetic expressions, assignment statements and built-in functions. Appropriate exercises are included.

none;25 hours for series;college/jr. college

PL/I ARRAYS (pl1array;1975;1978)

Jauregui, Luis H; Bell, Marcus; Cheslock, George J M; et al.
Computer Science Dept., ACSES Project, U of I

This lesson in the PL/I series teaches basics of arrays, array declarations, singly-dimensioned arrays, multiply-dimensioned arrays, operations on entire arrays, input/output of arrays, and array built-in functions. It also contains a sorting example and has appropriate exercises for the student.

none;25 hours for series;college/comm. or jr. college

PL/I ARRAYS (ADVANCED MATERIAL) (pl1arrayx;1975;1978)

Jauregui, Luis H; Friedman, H. George
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.

This lesson contains three advanced example programs using arrays. The examples are not suited to introductory students. The lesson contains appropriate exercises.

none;25 hours for series;college/jr. college

PL/I DO LOOPS (pl1do;1975;1978)

Finkel, Barry
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.

The lesson includes instruction in handling PL/I DO statements and loops. It includes appropriate exercises and drills for the student.

none;25 hours for whole series;college/junior college students

PL/I EDIT STATEMENTS (plledit;1975;1978)
Wassman, Bruce A; DeGregorio, Gary L; Friedman, H. George
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
This lesson gives instruction in EDIT-directed input/output and in input/output formats. It contains appropriate exercises. The drills on edit-directed input/output are found in lesson "plleditdrl".
none;25 hours for series;college/jr. college

PL/I IF STATEMENTS (pllif;1975;1978)
Carlson, Sylvia; Hertzog, Ted; Jehn, David; et al.
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
The lesson contains appropriate explanations, exercises and drills on the following:
IF...THEN...ELSE statements
DO groups as used with IF statements
nested IF...THEN...ELSE statements
omission of ELSE clauses
none;25 hours for series;college/jr. college

PL/I INPUT/OUTPUT (pllio;1975;1978)
Berg, Ken; Schreiber, Ben; Segal, Barr; et al.
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
The lesson addresses the following items:
introduction to PL/I files
stream input/output
LIST - directed input/output
SKIP, PAGE and LINE options
The lesson includes appropriate exercises.
none;25 hours for series;college/jr. college

PL/I PROCEDURES (pllproc;1975;1978)
Danielson, Ron; Friedman, H. George
Computer Science Dept., ACSES Project, U of I
In the series of lessons on the PL/I programming language, the lesson on PL/I procedures discusses procedures in general, subroutine and function procedures, internal and external procedures, parameters and arguments, and nested procedures. The lesson includes appropriate exercises.
none;25 hours for series;college/comm. or jr. college

PL/I STRINGS (pllstring;1975;1978)
Frye, G. David; Ho, Fred; Friedman, H. George
Dept. of Computer Science, ACSES Project, U of I
This PL/I lesson concerns itself with character constants and variables, character assignment statements, concatenation of character strings, character built-in functions, length of character strings and the VARYING attribute.
none;25 hours for whole series;college/junior college students

PL/I STR1: WRITTEN IN KAIL (pl1str1;1975;1978)
Gillett, Will
Comp. Sci. Dept., ACSES Project, Univ. of Ill.
The lesson deals with the implementation of STACKS and QUEUES in the PL/I programming language.It does not teach the student stacks or queues, but rather is intended to show how a stack or a queue might be implemented in PL/I. It provides enough background so that this particular implementation can be understood.
none;25 hours for series;college/comm. or jr. college

PL/I: THE PICTURE SPECIFICATION (pl1pic;1975;1978)
Meyer, Robert C; Friedman, H. George
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
This lesson contains instruction on the PL/I PICTURE feature, both as a DECLARE attribute and in input/output.
none;25 hours for series;college/jr. college

RECURSION IN PL/I (pl1recurse;1978;1978)
Milner, J. Michael
Comp. Sci. Dept., ACSES Project, Univ. of Ill.
The lesson addresses recursive procedures in PL/I, factorial examples, stacks, and automatic variables. There are appropriate exercises and drills for the students depending on the level of expertise of the users of the lessons.
none;25 hours for series;college/comm. or jr. col.

Pneumonia

INFECTIOUS INFILTRATIVE LUNG DISEASE, PART I (shp129;1975;unpublished)
Stutz, David R; Russell, Lawrence
Sheppard Air Force Base, Texas
This lesson covers the history and the physical exam for patients with pneumonia.
none;45-60 minutes;physicians' assistants

INHALATIONAL LUNG DISEASES (inhal;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of inhalational lung diseases. Sections on pneumoconiosis, extrinsic allergic alveolitis and chemical pneumonitis are presented. These diseases are characterized by damage to the lungs caused by inhalation of dusts (organic or inorganic), fumes or noxious substances.
optional touch panel;none;first year medical students

MICROLOGUE II: GRAM POSITIVE COCCI, PART II (microlog2b;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson continues the discussion of the gram positive cocci begun in Part I. The patient dialogue is continued with specific consideration of staphylococcus, streptococcus and streptococcus pneumoniae. Characteristics and morphology of these organisms are studied as well as criteria for identification.

microfiche;20 minutes;first year medical students

PENICILLIN-RESISTANT STREPTOCOCCUS PNEUMONIAE (penres;1977;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois

This lesson presents a case from "Morbidity and Mortality Weekly Reports" centered around the isolation of a penicillin-resistant strain of S. pneumoniae from a patient with apparent immunological dysfunction. Questions dealing with related material are interspersed throughout the lesson.

none;10 minutes;medical students

Pneumothorax

PNEUMOTHORAX AND INTERSTITIAL EMPHYSEMA (pneumo;1977;unpublished)
McCraw, Gordon W; Lawrance, David P; Coalson, J. J.
Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of interstitial emphysema and pneumothorax. The classification schema presented includes that favored by pathologists and that used by clinicians. The material is presented in a highly indexed outline format, facilitating access to specific areas.

optional touch panel;none;first year medical students

Poetics

POETRY ANALYSIS (blackbox;1976;unpublished)
Jordan, Pauline
Comp.-based Educ. Res. Lab., University of Illinois

This lesson presents the student with an analysis of e. e. cummings' "portrait".

none;45 minutes;Literature students, especially poetry

POETRY COMPOSITION (poetry;1973;unpublished)
Vojacek, Joe
Malcolm X College, Chicago, Illinois

This lesson allows the student to form his own collective concept of the poetic and permits the student to define poetry composed of words randomly selected. There are two sections: kinetic and concrete.

none;15-20 minutes;Literature students, especially poetry

RHYME (rime;1978;unpublished)
Vojacek, Joe
Malcolm X College, Chicago, Illinois
This lesson gives the student practice in recognizing and understanding what makes full, part, and symbolic rhyme. In full and part rhyme, the student learns by creating rhyme himself; in symbolic rhyme, he learns through abstract analysis.
none;60 minutes;students of poetry and literature

Poetry--Authorship
POETRY COMPOSITION (poetry;1973;unpublished)
Vojacek, Joe
Malcolm X College, Chicago, Illinois
This lesson allows the student to form his own collective concept of the poetic and permits the student to define poetry composed of words randomly selected. There are two sections: kinetic and concrete.
none;15-20 minutes;Literature students, especially poetry

Poetry--Technique
POETRY COMPOSITION (poetry;1973;unpublished)
Vojacek, Joe
Malcolm X College, Chicago, Illinois
This lesson allows the student to form his own collective concept of the poetic and permits the student to define poetry composed of words randomly selected. There are two sections: kinetic and concrete.
none;15-20 minutes;Literature students, especially poetry

Poisons
NOXIOUS DRUGS (shp33;1974;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson discusses drug classes and individual drugs exhibiting toxic manifestations in the respiratory system.
none;60 minutes;physicians' assistants

Poker
POKER (poque;1977;unpublished)
Hansen, Wilfred J
Computer Science Dept., U of I, Urbana, Ill.
This lesson teaches a practical appreciation of psychology and probability by involving the student in a game of poker. The game played is five card stud. There may be up to eight players and up to seven of these may be simulated by PLATO. There are subtle differences in the behaviors of the various PLATO players.
none;open-ended;general

Polarization (Light)

POLARIZERS -- FILTERS OF COHERENT ELECTROMAGNETIC RADIATION (polarize;1973;unpublished)

Bennett, Carol D

Physics Department, University of Illinois

The lesson provides a tool for working problems having to do with polarizers. A review of the properties of polarizers is presented and then the student is asked to do several exercises based on these properties. A template is given with help for working problems on 1 to 3 polarizers.

none;none;students of elementary physics

Polynomials

FACTORING QUADRATIC POLYNOMIALS (quad2;1976;1978)

DiBello, Louis V

Comp.-based Educ. Res. Lab., University of Illinois

This lesson provides drill practice in factoring quadratic polynomials.

none;60 minutes;intermediate algebra students

Population

see Demography

Population

see Population forecasting

Population

see Population--Statistical methods

Population forecasting

Age--standardization

AGE STANDARDIZATION (engrow;1976;unpublished)

Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.

Coordinated Science Laboratory, University of Illinois

This lesson demonstrates the techniques used to calculate age standardized mortality and fertility rates. The purpose of the standardization procedure is to determine a relationship between two or more variables while eliminating the influence of other variables.

none;open-ended;persons interested in populations

Contraception--Prevention

CONTRACEPTIVE COVERAGE MODEL (emaps;1976;unpublished)

Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.

Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using contraceptive coverage variables can be graphed. A list of available regions is provided and the variables can be changed for each projection.

none;open-ended;persons interested in populations

Economics

ECONOMIC DEVELOPMENT (econdevl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using economic variables can be graphed. A list of available regions is provided and variables can be changed for each projection.
none;open-ended;persons interested in populations

ECONOMIC DEVELOPMENT TWO SEX VERSION (riley;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using variables of two sex (male and female) economic development can be graphed. A list of available regions is provided and the variables can be changed for each projection.
none;open-ended;persons studying populations

ECONOMIC MODELS (econindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This lesson is an index to economic models. The lessons can also be accesssed individually.
none;open-ended;for persons interested in populations

LABOR FORCE ANALYSIS (laborl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using labor force analysis variables can be graphed. A list of available regions is provided and variables can be changed in each projection.
none;open-ended;for persons studying populations

Education

EDUCATIONAL COSTS AND ENROLLMENT MODEL (populs;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using educational cost and enrollment variables can be graphed. A list of available regions is provided and variables can be changed for each projection.
none;open-ended;persons interested in populations

Energy

ENERGY DEMAND MODELS (energindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This lesson is an index of energy demand models. The models can also be accessed individually.
none;open-ended;for persons interested in populations

ENERGY DEMAND PROJECTIONS MODEL (popecon1;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using energy demand variables can be graphed. A list of available regions is provided and the variables can be changed for each projection.
none;open-ended;persons interested in populations

ENVIRONMENTAL IMPACT OF ENERGY USE MODEL (environ;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This model lesson will allow a study of the environmental impact of energy use through the use of charts and explanations.
none;open-ended;for persons interested in populations

UNITED STATES ENERGY AND DEMAND AND SUPPLY MODEL (uspower;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using United States energy demand and supply variables can be graphed. The variables and parameters can be changed for each projection.
none;open-ended;persons interested in populations

Food supply

AGRICULTURAL EXPENDITURE MODEL (foodindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using agricultural expenditure variables can be graphed. A list of available regions is provided and the variables and parameters can be changed for each projection.
none;open-ended;persons studying populations

CEREAL SUPPLY AND DEMAND PROJECTION MODEL (cereal1;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Sciences Laboratory, University of Illinois
Population growth is a major factor affecting the total requirement of food. Because of this rapidly increasing population, world food supply has become a major concern. Through the use of this model lesson, projections using cereals supply and demand variables can be graphed. Variables can be changed for each projection.
none;open-ended;persons interested in populations

FOOD DEMAND AND SUPPLY MODELS (foodindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This lesson is an index of food demand and supply models. The models can also be accessed individually.
none;open-ended;persons studying populations

FOOD DEMAND AND SUPPLY PROJECTIONS MODEL (foodproj;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using food demand and supply variables can be graphed. A list of the available regions is provided and the variables can be changed in each projection.
none;open-ended;persons interested in populations

FOOD SUPPLY MODEL (poplab;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using numerous food supply variables can be graphed. A list of available regions is provided and the variables and parameters can be changed for each projection.
none;open-ended;persons interested in populations

UNITED STATES FOOD PRODUCTION MODEL (usfood;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using United States food production variables can be graphed. A list of the available regions is provided and variables can be changed for each projection.
none;open-ended;of general interest

WORLD GRAIN TRADE MODEL (fmaps;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using world grain trade variables can be graphed. A list of available regions is provided and the variables and parameters can be changed in each projection.
none;open-ended;for persons studying populations

General

POPULATION DENSITY MODEL (foodindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using population density variables can be graphed. A list of available regions is provided and the variables for each projection can be changed.
none;open-ended;persons studying populations

POPULATION DYNAMICS (popdyn;1974;1977)
Boggs, Stephen H
CERL, University of Illinois

The program provides a computer simulation of population growth with variable birth rates, death rates and other parameters in order to determine the future of a population. The reference point data provided are the United States 1970 population data. A student can use the reference data or design his own. Lesson was part of a Biology series.

none;open-ended;college biology students

POPULATION DYNAMICS WORKBOOK (plesl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

This lesson is a workbook designed to assist in the study of the Population Dynamics package. Ten main questions and two supplementary questions are provided, covering many aspects of population projection.

hard copy workbook;open-ended;persons interested in populations

POPULATION MODELS (popindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

This lesson is an index of population models. Most can also be accessed individually.

none;open-ended;for persons interested in populations

History

HISTORICAL POPULATION GROWTH MODEL (popoil;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using historical population growth variables can be graphed. Lists of available regions are provided, and variables and parameters can be changed in each projection.

none;open-ended;persons studying populations

Migration and urbanization

MIGRATION AND URBANIZATION MODEL (migl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using migration and urbanization variables can be graphed. Both internal and international migration can be examined. Variables can be changed for each projection.

none;open-ended;persons studying populations

Mortality

AGE STANDARDIZATION (engrow;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

This lesson demonstrates the techniques used to calculate age standardized mortality and fertility rates. The purpose of the standardization procedure is to determine a relationship between two or more variables while eliminating the influence of other variables.

none;open-ended;persons interested in populations

LIFE TABLES (ltable;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

This life table lesson is a simplified model of the life history of a group of people as it is diminished gradually by deaths.

none;open-ended;persons studying populations

Petroleum

CURRENT UNITED STATES ENERGY CONDITION MODEL (oil;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, current United States energy conditions can be shown. Variables can be changed for each graph.

none;open-ended;persons interested in populations

OIL AND MAJOR PRODUCING COUNTRIES MODEL (pdgwork;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using oil and major producing countries variables may be graphed.

none;open-ended;persons interested in populations

WORLD PETROLEUM FLOW MODEL (oilmap;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using world petroleum flow variables can be shown. A list of available geographical regions is provided and variables and parameters can be changed for each projection.

none;open-ended;persons interested in populations

Power resources--Environmental aspects

ENVIRONMENTAL IMPACT OF ENERGY USE MODEL (environ;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

This model lesson will allow a study of the environmental impact of energy use through the use of charts and explanations.

none;open-ended;for persons interested in populations

Sex--Statistics

TWO SEX POPULATION PROJECTION MODELS (twosexl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using two sex population variables can be graphed. Lists of available geographical regions are provided and the variables and parameters changed in each projection.

none;open-ended;persons interested in populations

Population forecasting--Mathematical models

GENERAL PURPOSE MODEL (gmodel;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this general purpose model lesson, projections of the number of any population-related quantity and its cost in dollars can be graphed. A list of available regions is provided, and the variables and parameters can be changed in each projection.

none;open-ended;persons studying populations

HOW TO PROJECT A POPULATION (popcal;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

This lesson explains in great detail the projection techniques used in the population projection program.

none;open-ended;persons studying populations

POPULATION PROJECTIONS MODEL (populj2;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois

Through the use of this model lesson, projections using numerous population variables can be graphed. Lists and maps of available regions are provided. The variables and parameters can be changed in each projection.

none;open-ended;persons interested in populations

Population genetics

GENETIC DRIFT (drift;1974;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle

This lesson uses standard Hardy-Weinberg equations (with stochastic parameter) to allow students to investigate the effects of variables associated with genetic drift ("founder effect"). Students decide the size of the founder population to be used as parents in succeeding generations.

none;45 minutes;university/college biology students

POPULATION GENETICS (hpopgen;1977;unpublished)
Daniel, William; Seyfried, Thomas; Brenner, Lisa; et al.
School of Basic Medical Sciences, Univ. of Illinois

This lesson provides primary instruction in the basics of population genetics. The Hardy-Weinberg equilibrium is reviewed and mutation, migration, selection and drift are discussed. Emphasis is on leading the student toward understanding the concepts, and acquiring competence in executing the associated calculations.

none;none;first year medical students

POPULATION GENETICS: HARDY-WEINBERG PRINCIPLE (popgen;1974;1978)
Grossman, Michael; Walter, David
Dept. of Dairy Science, Univ. of Ill., Urbana, IL

The student is shown how to deduce the effects of mutation, migration, selection and drift on gene frequency by observing various simulations. Familiarity with the Hardy-Weinberg principle and its assumptions is assumed.

none;10 minutes per simulation;college and university students of genetics

POPULATION GENETICS: INBREEDING (angen;1974;1978)
Grossman, Michael; Walter, David
Dept. of Dairy Science, Univ. of Ill., Urbana, IL

This population genetics lesson demonstrates the significant problems of inbreeding by presenting simulations whose parameters are chosen by the students themselves. The objective of the lesson is to teach the student to deduce how the degree of inbreeding affects the loss of heterozygosity. Fairly advanced material.

none;open-ended, 10 minutes/simulation;college/university students

POPULATION GENETICS: QUANTITATIVE GENETICS (quantgen;1974;1978)
Grossman, Michael; Walter, David
Dept. of Dairy Science, Univ. of Ill., Urbana, IL

The lesson teaches the student how to deduce the effects of various selection methods and intensities on representative traits from agricultural production by simulating a quantitative genetics laboratory in which the program generates graphs of improvement vs. generations depending on the parameters chosen by the student.

none;open-ended; 10 minutes per simulation;college/university students

Population projections
see Population forecasting

Population--Statistical methods

AGE STANDARDIZATION (engrow;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This lesson demonstrates the techniques used to calculate age standardized mortality and fertility rates. The purpose of the standardization procedure is to determine a relationship between two or more variables while eliminating the influence of other variables.
none;open-ended;persons interested in populations

AGRICULTURAL EXPENDITURE MODEL (foodindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using agricultural expenditure variables can be graphed. A list of available regions is provided and the variables and parameters can be changed for each projection.
none;open-ended;persons studying populations

CEREAL SUPPLY AND DEMAND PROJECTION MODEL (cereall;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Sciences Laboratory, University of Illinois
Population growth is a major factor affecting the total requirement of food. Because of this rapidly increasing population, world food supply has become a major concern. Through the use of this model lesson, projections using cereals supply and demand variables can be graphed. Variables can be changed for each projection.
none;open-ended;persons interested in populations

CONTRACEPTIVE COVERAGE MODEL (emaps;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using contraceptive coverage variables can be graphed. A list of available regions is provided and the variables can be changed for each projection.
none;open-ended;persons interested in populations

DEMOGRAPHIC METHODOLOGY PROGRAMS (lessindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This lesson consists of self-contained programs designed to demonstrate various aspects of demographic methodology. The user may work through each of the programs on an individual basis.
none;open-ended;persons studying populations

FOOD DEMAND AND SUPPLY PROJECTIONS MODEL (foodproj;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using food demand and supply variables can be graphed. A list of the available regions is provided and the variables can be changed in each projection.
none;open-ended;persons interested in populations

FOOD SUPPLY MODEL (poplab;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using numerous food supply variables can be graphed. A list of available regions is provided and the variables and parameters can be changed for each projection.
none;open-ended;persons interested in populations

GENERAL PURPOSE MODEL (gmodel;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this general purpose model lesson, projections of the number of any population-related quantity and its cost in dollars can be graphed. A list of available regions is provided, and the variables and parameters can be changed in each projection.
none;open-ended;persons studying populations

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Coordinated Science Laboratory, University of Illinois
This life table lesson is a simplified model of the life history of a group of people as it is diminished gradually by deaths.
none;open-ended;persons studying populations

MIGRATION AND URBANIZATION MODEL (migl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using migration and urbanization variables can be graphed. Both internal and international migration can be examined. Variables can be changed for each projection.
none;open-ended;persons studying populations

POPULATION DENSITY MODEL (foodindx;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using population density variables can be graphed. A list of available regions is provided and the variables for each projection can be changed.
none;open-ended;persons studying populations

POPULATION DYNAMICS WORKBOOK (plesl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This lesson is a workbook designed to assist in the study of the Population Dynamics package. Ten main questions and two supplementary questions are provided, covering many aspects of population projection.
hard copy workbook;open-ended;persons interested in populations

POPULATION PROJECTIONS MODEL (populj2;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using numerous population variables can be graphed. Lists and maps of available regions are provided. The variables and parameters can be changed in each projection.
none;open-ended;persons interested in populations

TWO SEX POPULATION PROJECTION MODELS (twosexl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using two sex population variables can be graphed. Lists of available geographical regions are provided and the variables and parameters changed in each projection.
none;open-ended;persons interested in populations

UNITED STATES FOOD PRODUCTION MODEL (usfood;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using United States food production variables can be graphed. A list of the available regions is provided and variables can be changed for each projection.
none;open-ended;of general interest

Porophyrin and porophyrin compounds

THE STRUCTURE OF HEMOGLOBIN AND MYOGLOBIN (hemocopy;1976;unpublished)
Bucci, Enrico; Bender, Jeffrey; Faith, Gregory; et al.
School of Medicine, Univ. of Maryland, Baltimore

This lesson presents the basic structural components of the oxygen-carrying protein in man. The quaternary structure of hemoglobin and the most important conformational changes that are produced by oxygenation are represented graphically.

none;15 minutes;first year medical students

Postoperative care

POST OPERATIVE NURSING CARE (postop;1978;1978)
Kirchhoff, Karen
School of Nursing, Univ. of Ill. Med. Ctr., Chicago

The lesson teaches the basis for planning nursing care for a postoperative patient. The focus is on the nursing care of patients who have had general surgery and a normal postoperative recovery. The "time period" is the immediate postoperative phase after transfer from the Recovery Room. General intervention and evaluation criteria are stressed.

none;none;professional nursing students

Potassium in the body

MACROMINERALS (macmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I

This lesson presents information about macrominerals, or those minerals required in the human diet in amounts exceeding 100 mg. per day. The macrominerals are calcium, phosphorus, magnesium, potassium, sodium, sulphur and chlorine.

none;25-30 minutes;nutrition students

Potential, Theory of

POTENTIALS OF METAL MACRO-ELECTRODES IN AQUEOUS SOLUTIONS (bioinst2;1978;1979)
Beck, Howard W; Olson, Walter H
Dept. of Elec. Engineering, U of I, Urbana, Ill.

In this lesson you can simulate an experiment in which the potential of an electro-chemical cell is measured as a function of current flowing through the cell. In this way the equilibrium and non-equilibrium behavior of the cell can be examined.

none;none;college/university students

Potentiometer

POTENTIOMETRIC DETERMINATION OF K_{sp}, PART I (vuksp;1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is designed for students in quantitative analysis. It introduces the basic concepts of potentiometric measurements of an equilibrium constant and the use of activities in calculations. The purpose of the lesson is to prepare the student for a laboratory experiment.
none;60 minutes;chemistry students of quantitative analysis

POTENTIOMETRIC DETERMINATION OF K_{sp}, PART II (vukspl;1978;1978)
Nagel, E H
Chemistry Dept., Valparaiso Univ., Valparaiso, Indiana
The lesson is a continuation of lesson "vuksp" (Potentiometric Determination of K_{sp}, Part I). It is designed to treat the data obtained in a typical laboratory experiment. The data may be obtained directly from the program (and access to the program may be restriced) or from actual laboratory data.
none;30 minutes;chemistry students of quantitative analysis

Power resources--Environmental aspects

ENVIRONMENTAL IMPACT OF ENERGY USE MODEL (environ;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
This model lesson will allow a study of the environmental impact of energy use through the use of charts and explanations.
none;open-ended;for persons interested in populations

Precipitation (Chemistry)

SEPARATION OF CATIONS FROM SOLUTION (iqual;1973;unpublished)
Francis, Larry D
Computer-based Educ. Res. Lab., Univ. of Illinois
The lesson presents a simulated laboratory exercise to the student. He is given a mixture of four ions in the same test tube and is required to separate these into four test tubes by selective precipitation. He may review materials on the concepts of precipitation and access descriptions of reagents to gain information for appropriate test selections.
none;none;college/university students

Precipitin reaction

COMPARATIVE SEROLOGY (serology;1974;unpublished)
Hyatt, Gary; Eades, David C
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses "open-ended" investigatory techniques to allow students to build two phylogenetic dendograms for taxa of insects and taxa of mammals. The quantitative method employed for making relational decisions is the blood serum precipitin test.
none;60 minutes;university/college zoology students

Pregnancy, Complications of

AND EVERYTHING NICE (oventroubl;1977;unpublished)
Arab, Morsi M; Kemp, Larry; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development
In this simulation, a 32-year-old pregnant secretary comes into the office with nausea, fainting and other distress. She is in her seventh month. The student must gather history, physical and lab data, make a diagnosis, prescribe treatment, and manage complications. Clinical knowledge questions are interjected to provide didactic supplement to the problem.
none;25 minutes;medical students

Private flying

PRIVATE PILOT - WRITTEN EXAMINATION STUDY GUIDE (flight;1978;1979)
Trollip, Stanley R; Entwistle, William C; Treichel, Curt W
Institute of Aviation, U of I, Urbana, Illinois
This lesson allows the student pilot to practice taking the written examination for private pilot. The user may choose to take a quiz over one major category, a quiz over one or more subcategories, or a general quiz over all categories.
handout available: UI Aviation Res. Lab.;open-ended;student pilots

Probabilities

GENETIC RISK ESTIMATES (genrisk;1977;unpublished)
Daniel, William; Brenner, Lisa; Schultz, Stephen
School of Basic Medical Sciences, Univ. of Illinois
This lesson teaches the student to calculate genetic risks for single factor traits, to define prior and posterior probabilities, to calculate these probabilities using family history data and to interpret the risk figures to a layman. Pre- and post-tests are included.
none;none;first year medical students

INTRODUCTION TO PROBABILITY (ccprob;1978;unpublished)
Baillie, Robert
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
In this lesson you will learn about probability; what it means and what it doesn't mean, and how to compute probabilities of simple events.
none;30 minutes;community college students

MATH. FOR COMMUNITY COLLEGES AND ADULT EDUCATION (mathcc;1976;unpublished)
Community College Math. Group
Computer-based Edcuation Research Lab., Univ. of Ill.
The program is the index program for a series of lessons written for Community Colleges and Adult Education under a grant from the National Science Foundation. Lessons are available in Arithmetic, Algebra and Graphing, Geometry, Measurement and Trigonometry, and Probability.
none;variable;community college and adult education students

MEDICAL GENETICS LABORATORY: METABOLIC DISEASES AND MEDICINE (genlab;1977;unpublished)
Li, I-Chian; Daniel, William; Brenner, Lisa; et al.
School of Basic Medical Sciences, Univ. of Illinois

This lesson presents two patients, each with a metabolic disease. The student is provided with clinical, laboratory and family data and is requested to diagnose the specific disorder, provide a description of the molecular basis of the disease and provide recurrence risks. Branch pathways are provided to permit actual lab experience or test results.

microfiche;open-ended;first year medical students

PROBABILITY (elstat2;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.

This lesson will cover the basic definitions and rules in simple probability theory.

none;none;college/university students

PROBABILITY AND HEREDITY (proba;1977;1978)
Baillie, Robert; Hyatt, Gary
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

This lesson defines probability, demonstrates Mendel's laws, and gives the student some practice with probabiltiy problems and genetic crosses.

none;40-50 minutes;college/university students

PROBABILITY GAME (wmg04;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois

A probability game is presented in which the student indicates whether the number the computer presents is the largest, smallest or neither in a list of ten numbers chosen by the computer. Games are short, but one can play successive ones and the score is accumulative.

touch panel optional;2 or 3 minutes;elementary school children

Programming languages (Electronic computers)

APL

AN INTRODUCTORY LESSON TO APL (aplintro;1975;1978)
Simkin, Merrick; Padua, David; Groupe, Alan; et al.
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.

This is the first in a series of lessons teaching the APL programming language. The first lesson presents the basics of the language. There is a HELP sequence for information about terms used in the language, a readily accessible diagram of the APL keyset configuration and workspace in which students can try writing programs.

none;none;college/junior college students

SCALAR ARITHMETIC IN APL (aplscalar;1975;1978)
Simkin, Merrick; Padua, David; Groupe, Alan; et al.
Dept. of Computer Science, ACSES Project, U. of I
This is the second in a series of three lessons teaching the APL Programming Language. The scalar mathematical operators are examined in this lesson. Scalar operators are those operating on the value of only one number as opposed to an array of values.
none;none;college/university students

VECTOR ARITHMETIC IN APL (aplvector;1975;1978)
Padua, David; Simkin, Merrick; Groupe, Alan; et al.
Dept. of Computer Science, ACSES Project, U. of I
This is the third in a series of three lessons teaching the APL Programming Language. The vector mathematical operators are examined in this lesson. Vector operators are those operating on arrays of values as opposed to only one number.
none;none;college/university students

FORTRAN

FORTRAN DO STATEMENTS (fortdo2;1975;unpublished)
Barta, Ben-Zion; Conn, Richard L; Jones, Barbara; et al.
Computer Science Dept., Univ. of Ill., Urbana, IL
The lesson describes the FORTRAN DO statements, statements designed explicitly to facilitate programming of sequences. The statements are of a kind characteristic of most high level programming languages.
none;none;high school and college computer programming students

FORTRAN IF STATEMENTS (fortif;1975;unpublished)
Strass, Gregory; Montanelli, Richard
Computer Science Deptartment, University of Illinois
This lesson discusses the FORTRAN IF statement, covering topics such as the logical IF, the arithmetic IF and logical operators.
none;none;high school and college computer programming students

FORTRAN SUBPROGRAM EXAMPLES (fortsubex;1975;unpublished)
Leach, Sandy; Montanelli, Richard
Computer Science Dept., U. of Illinois, Urbana, IL
The lesson gives examples of FORTRAN subprograms assuming the student has a knowledge of FORTRAN function and subroutine subprograms. The lesson can be tailored by the instructor to specific student knowledge by setting a parameter.
none;none;computer programming students

FORTRAN'S FORMAT STATEMENT (fortfmt;1975;unpublished)
Meller, David V
Comp.-based Educ. Res. Lab., University of Illinois
This lesson presents the FORTRAN FORMAT statement in "BITS" fashion, with outline, concepts, principles, questions and drill for each topic covered.
none;none;computer programming students

INTRODUCTION TO FORTRAN ARITHMETIC (fortarith;1975;unpublished)
Barber, Jeff; Montanelli, Richard
Department of Computer Science, Univ. of Illinois
This computer science lesson teaches various aspects of FORTRAN Arithmetic and includes a final quiz on the information.
none;none;computer programming students

AN INTRODUCTION TO FORTRAN DO LOOPS (fortdol;1976;unpublished)
Hansen, Wilfred J; Neubauer, Heidi; Struven, Terry; et al.
Computer Science Dept., Univ. of Illinois, Urbana
The lesson discusses FORTRAN DO loops and gives examples for the persons learning the FORTRAN programming language. The lesson concludes with a quiz.
none;none;college/university students

AN INTRODUCTION TO FORTRAN SUBROUTINE SUBPROGRAMS (fortsubl;1975;1978)
Slaughter, Keith; Montanelli, Richard
Comp. Sci. Dept., ACSES Project, Univ. of Ill.
The lesson on FORTRAN subroutine subprograms can be tailored to specific student knowledge by setting a parameter from the "csrouter". The lesson presents text and review exercises with options for text only, review only or both text and review exercises.
none;10-20 hours for series;college/comm. or jr. college

MULTI-DIMENSIONAL ARRAYS IN FORTRAN (fortarray2;1975;1978)
Kawell, Len; Montanelli, Richard
Comp. Sci. Dept., ACSES Project, Univ. of Ill.
The lesson teaches how to handle multi-dimensional arrays in two types of FORTRAN input/output statements: WATFOR/WATFIV format-less statements or standard FORTRAN formatted input/output statements.
none;10-20 hours for series;college/community college

ONE DIMENSIONAL FORTRAN ARRAYS (fortarrayl;1975;unpublished)
Levin, Ken; Fill, Joe; Friedman, H. George; et al.
Computer Science Dept., Univ. of Illinois
The lesson on array handling in the FORTRAN programming language is geared both to students and to an instructor considering the lesson for use in a course. In the latter case, the instructor is shown how to tailor a parameter especially for his students. The lesson assumes familiarity of the students to some FORTRAN input and output statements.
none;none;college/university students

WATFIV CHARACTER MANIPULATION (fortchar1;1977;unpublished)
Hansen, Wilfred J
Computer Science Dept., U of I, Urbana, Ill.
This lesson discusses manipulating character data and the advantages there are over using numerical data.
none;none;beginning computer science students

WELCOME TO FORTFMT1-A LESSON IN THE BASIC ART OF FORMATTING (fortfmt1;1975;unpublished)
Strass, Gregory; Montanelli, Richard
Computer Science Dept., University of Illinois
This lesson teaches the user the output controls for a FORTRAN program using the PRINT, WRITE and FORMAT statements.
none;none;computer programming students

WELCOME TO FORTSAMPLE (fortsample;1976;1978)
Groupe, Alan; Simkin, Merrick
Department of Computer Science, U of I, Urbana, Ill.
This lesson is an introduction to computer programming using the FORTRAN language.
none;none;beginning Computer Science students

GRAFIT

GRAFIT PROGRAMMING FACILITY (grafit;1971;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
GRAFIT is a programmable calculator which graphs the results. The program provides a simple programming language with inherent graphical output, designed to assist science students to compute and graph results for small calculations. The program is a general service type program, not a lesson.
none;open-ended;college/university science students

PL/I

DATA STRUCTURES: AN INTRODUCTION FOR PL/I (pl1struct;1975;1978)
Benveniste, Michael; Friedman, H. George
Comp. Sci. Dept., ACSES Project, Univ. of Ill.
The lesson is on both data structures and PL/I. The concepts presented can be used in many languages including COBOL, PASCAL, and ALGOL. However, because the lesson is designed primarily for other PL/I lessons, the drills and program segments, as well as the examples, are in PL/I.
none;25 hours for series;college/comm. or jr. college

DRILLS IN PL/I INPUT/OUTPUT STATEMENTS (plleditdrl;1975;1978)
Sallinger, Robert; Tobias, Robert S
Computer Science Dept., ACSES Project, U of I
The lesson is another in the series on the programming language, PL/I. It contains drills on EDIT-directed input/output suitable for use in conjunction with lesson "plledit". Students with minimal background in PL/I should be able to gain some degree of proficiency in handling input/output statements after working through the drills.
none;25 hours for series;college/comm. or jr. college

INTRODUCTION TO THE PL/I SEQUENCE (pllintro;1975;1978)
Friedman, H. George
Dept. of Comp. Sci., ADSES project, Univ. of Ill.
This lesson is an introductory lesson which discusses the objectives of the PL/I sequence of lessons and describes each individual lesson. It also contains a section on the current status of the sequence and outlines plans for the improvement of the sequence.
none;25 hours for series;college/jr. college

PL/I ARITHMETIC (pllarith;1975;1978)
LeSturgeon, Dan; Mittelstadt, Mike; McKeown, Dave; et al.
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
The lesson discusses arithmetic expressions, assignment statements and built-in functions. Appropriate exercises are included.
none;25 hours for series;college/jr. college

PL/I ARRAYS (pllarray;1975;1978)
Jauregui, Luis H; Bell, Marcus; Cheslock, George J M; et al.
Computer Science Dept., ACSES Project, U of I
This lesson in the PL/I series teaches basics of arrays, array declarations, singly-dimensioned arrays, multiply-dimensioned arrays, operations on entire arrays, input/output of arrays, and array built-in functions. It also contains a sorting example and has appropriate exercises for the student.
none;25 hours for series;college/comm. or jr. college

PL/I ARRAYS (ADVANCED MATERIAL) (pllarrayx;1975;1978)
Jauregui, Luis H; Friedman, H. George
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
This lesson contains three advanced example programs using arrays. The examples are not suited to introductory students. The lesson contains appropriate exercises.
none;25 hours for series;college/jr. college

PL/I DO LOOPS (plldo;1975;1978)
Finkel, Barry
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
The lesson includes instruction in handling PL/I DO statements and loops. It includes appropriate exercises and drills for the student.
none;25 hours for whole series;college/junior college students

PL/I EDIT STATEMENTS (plledit;1975;1978)
Wassman, Bruce A; DeGregorio, Gary L; Friedman, H. George
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
This lesson gives instruction in EDIT-directed input/output and in input/output formats. It contains appropriate exercises. The drills on edit-directed input/output are found in lesson "plleditdrl".
none;25 hours for series;college/jr. college

PL/I IF STATEMENTS (pllif;1975;1978)
Carlson, Sylvia; Hertzog, Ted; Jehn, David; et al.
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
The lesson contains appropriate explanations, exercises and drills on the following:
IF...THEN...ELSE statements
DO groups as used with IF statements
nested IF...THEN...ELSE statements
omission of ELSE clauses
none;25 hours for series;college/jr. college

PL/I INPUT/OUTPUT (pllio;1975;1978)
Berg, Ken; Schreiber, Ben; Segal, Barr; et al.
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
The lesson addresses the following items:
introduction to PL/I files
stream input/output
LIST - directed input/output
SKIP, PAGE and LINE options
The lesson includes appropriate exercises.
none;25 hours for series;college/jr. college

PL/I PROCEDURES (pllproc;1975;1978)
Danielson, Ron; Friedman, H. George
Computer Science Dept., ACSES Project, U of I
In the series of lessons on the PL/I programming language, the lesson on PL/I procedures discusses procedures in general, subroutine and function procedures, internal and external procedures, parameters and arguments, and nested procedures. The lesson includes appropriate exercises.
none;25 hours for series;college/comm. or jr. college

PL/I STRINGS (pllstring;1975;1978)
Frye, G. David; Ho, Fred; Friedman, H. George
Dept. of Computer Science, ACSES Project, U of I
This PL/I lesson concerns itself with character constants and variables, character assignment statements, concatenation of character strings, character built-in functions, length of character strings and the VARYING attribute.
none;25 hours for whole series;college/junior college students

PL/I STR1: WRITTEN IN KAIL (pllstrl;1975;1978)
Gillett, Will
Comp. Sci. Dept., ACSES Project, Univ. of Ill.
The lesson deals with the implementation of STACKS and QUEUES in the PL/I programming language.It does not teach the student stacks or queues, but rather is intended to show how a stack or a queue might be implemented in PL/I. It provides enough background so that this particular implementation can be understood.
none;25 hours for series;college/comm. or jr. college

PL/I: THE PICTURE SPECIFICATION (pllpic;1975;1978)
Meyer, Robert C; Friedman, H. George
Dept. of Comp. Sci., ACSES Project, Univ. of Ill.
This lesson contains instruction on the PL/I PICTURE feature, both as a DECLARE attribute and in input/output.
none;25 hours for series;college/jr. college

RECURSION IN PL/I (pllrecurse;1978;1978)
Milner, J. Michael
Comp. Sci. Dept., ACSES Project, Univ. of Ill.
The lesson addresses recursive procedures in PL/I, factorial examples, stacks, and automatic variables. There are appropriate exercises and drills for the students depending on the level of expertise of the users of the lessons.
none;25 hours for series;college/comm. or jr. col.

Programming languages (Electronic computers)

TUTOR (The PLATO language)

INTRODUCTION TO THE TUTOR LANGUAGE (introtutor;1973;1977)
Ghesquiere, James R; Davis, Celia; Thompson, Charlene
Comp.-based Educ. Res. Lab., University of Illinois
This is an introduction to the TUTOR language giving elementary exercises as an introduction to the teacher/author. The lesson is to be used in conjunction with the manual, "Introduction to TUTOR".
none;2 hours;general

Programming (Electronic computers)

COMPUTER NUMBERS (numbers;1975;unpublished)
Strass, Gregory; Montanelli, Richard; Friedman, H. George
Computer Science Dept., University of Illinois
This lesson is designed primarily for teaching about computers such as the IBM System/360/370 series, with which hexadecimal numbers are useful. The discussion of storage of integer and real numbers is specifically 360/370 oriented. The lesson can be set up to instruct in either octal or hexadecimal numbers or both.
none;none;instructors and students of computer science

GRAPHICAL LESSON STRUCTURE DESIGN (csdesign;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Illinois
The lesson provides a "quick and dirty" means to design the calling structure of a lesson.
none;open-ended;college and university students of computer science

A MINI PROGRAMMING SYSTEM FOR INPUT-OUTPUT SUPERVISION (buffering;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Illinois
The program provides a mini language for input/output buffering based on the mini programming system prototype, "csmini".
none;open-ended;college and university students of computer science

MINI PROGRAMMING SYSTEM: PLOTTING RECURSIVELY DEFINED CURVES (csmini;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Ill, Urbana, IL
The lesson provides a mini programming system which can be used to study recursive programs. The supported mini language is designed for simple curve plotting to show that a small program can generate complex graphics. Examples are provided of various types of curves such as Hibert, Sierpinski, and W curves.
none;open-ended;college or university students of computer science

A MINI PROGRAM. SYS.: EXPERIENCE WITH DIJKSTRA'S SEMAPHORES (semaphore; 1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Illinois
The lesson explains the makeup of the mini programing system as a list of real processes and offers practice with several types of subroutine connectives, such as semaphores and synchronizing primitives.
none;open-ended;college and university students of computer science

MINI-PROGRAMMING SYSTEM FOR TREE & LIST MANIPULATION (cstrees;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Ill., Urbana, IL

This lesson allows the student to define binary trees and linked lists in recursive terms and to write and simulate the execution of a program. The execution of the program is shown graphically. Six programs are provided as examples or the student may experiment with his own, altho' he cannot save his program when he exits from the lesson.

none;open-ended;college and university students studying computer science

A MINI-PROGRAMMING SYSTEM: FILING SYSTEM ADMIN. (csminiadm;1976;1978)
Schreiner, Axel T
Computer Science Department, Univ. of Illinois

The program is a utility to control the datasets used by the filing system developed for the mini programming system prototype, "csmini".

none;open-ended;college or university students of computer science

PROCALC (I) (procalc;1977;1979)
Thomasson, James
University of Illinois

The purpose of this lesson is that of a calculator designed to do work. For programmed operation, the program consists of a list of instructions which are processed sequentially. In this sense, the calculator forms the simplest type of computer.

none;open-ended;general

STRUCTURE OF A COMPUTER AND MACHINE LANGUAGE SIMULATION (hypo;1978;1978)
Wunderlich, Bernd
Univ. of Illinois and Universitat Frankfort/M

The lesson presents the basic concept of the construction and operation of a computer by describing a hypothetical computer, HYPO, which has its own machine language with which the student can practice programming and can see how the operation codes execute.

none;open-ended;secondary, college or university students

Promissory notes

NOTES AND INTEREST (notint;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.

This lesson familiarizes the student with recording notes and calculating and recording interest and discounts.

none;45-60 minutes;introductory accounting students

Proof-reading

PROOFREADING (headline;1977;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois

This lesson's purpose is to sensitize the student to proofreading and spelling especially through the recognition of misplaced and misused words. Four part index covers typos, misplaced modifiers, ambiguous words, puzzling prepositions and a final drill.

none;20 minutes;Composition students, especially basic or remedial.

Protazoa

QUIZ ON MEDICAL PROTOZOAN PARASITOLOGY (paraquiz;1976;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson is a self-assessment mechanism for the student to determine his/her knowledge of protazoans of medical importance. Questions concerning general characteristics, life cycles, diagnoses, symptoms and pathology, and treatments of the various species are presented. Evaluation and diagnosis are provided upon completion of the quiz.

none;25 minutes;first year medical students

Protein binding

SCATCHARD ANALYSIS (scatch;1977;unpublished)
Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore

This lesson gives the average medical reader or student sufficient understanding of the basics of Scatchard analysis to comprehend scientific investigation based on this type of receptor analysis. It draws an analogy between Scatchard Analysis and the similar, but more familiar Michaelis-Menten Kinetics.

none;10 minutes;first year medical students

Protein biosynthesis

BIOSYNTHESIS OF PROTEIN (shp8;1974;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas

This lesson will describe the main sequence of events leading to the synthesis of nucleic acids and protein in the cell, identify the roles played by the nucleic acids in the biosynthesis of protein, and predict the effect of point mutations on protein primary structure.

none;60 minutes;physicians' assistants

DNA AND PROTEIN SYNTHESIS (xcell;1968;unpublished)
Tenczar, Paul J
Comp.-based Educ. Res. Lab., University of Illinois
This two part lesson begins with a summary and introduction to DNA, RNA, the genetic code and protein synthesis. If the basics are already understood, the student may go directly to part two. In part two, three amino acids and the corresponding m-RNA codes are provided and the student must determine the DNA and t-RNA codes needed to synthesize the protein.
none;30-60 minutes;first year biology students

Protein deficiency

PROTEINS (nutr5;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
The fifth lesson in the Nutrition Series discusses proteins and their classification, digestion and absorption, and function in the body. Requirements and deficieny are also included.
none;25-30 minutes;nutrition students

Proteins

AMINO ACIDS, PEPTIDES, PROTEINS, AS ACIDS AND BASES (mph3;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the acid-base character of amino acids, peptides and proteins, and examines the concepts of pH, H^+, HA, K', pK' and buffers at the biochemical level.
none;15 minutes;first year medical students

PROTEINS (nutr5;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
The fifth lesson in the Nutrition Series discusses proteins and their classification, digestion and absorption, and function in the body. Requirements and deficieny are also included.
none;25-30 minutes;nutrition students

Proton magnetic resonance

NUCLEAR MAGNETIC RESONANCE (NMR) (SHORT VERSION) (nmr3short;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson is a shortened version of "nmr3".
The lesson presents a review of the principles underlying the interpretation of NMR spectra, allows the student to work through sample problems and presents one set of problems in which the organic compounds are to be identified from their empirical formulas and their NMR spectra.
none;52 minutes;college/university students

NUCLEAR MAGNETIC RESONANCE (NMR): PART 1 (nmr1;1972;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson discusses NMR signals from protons, the recognition of types of protons in organic compounds, chemical shift and chemical shift scales.
none;29 minutes;college/university students

NUCLEAR MAGNETIC RESONANCE (NMR): PART 2 (nmr2;1972;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.
This lesson on nuclear magnetic resonance deals with proton spin-spin coupling and the n+1 rule. It allows the student to calculate AB and AB 2 spectra from J and values of the chemical shift.
microfiche;35 minutes;college and university chemistry students

NUCLEAR MAGNETIC RESONANCE (NMR): PART 3 (nmr3;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson presents a review of the principles underlying the interpretation of NMR spectra, allows the student to work through sample problems and presents three sets of problems in which the organic compounds are to be identified from their empirical formulas and their NMR spectra. The lesson requires a microfiche.
microfiche;102 minutes;college/university students

Protozoa

PARASITIC PROTOZOAN TERMINOLOGY (prototerm;1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
With respect to the four major groups of medically important parasitic protozoa, i.e. amoebae, ciliates, flagellates, sporozoans, the lesson reviews terms commonly associated with the morphology, nutrition, excretion, and life cycles in a linear format of text with inserted questions.
none;5 minutes;first year medical students

Psychiatric nursing

AFFECTIVE ILLNESS AND THEIR CAUSES AND TREATMENT (nursing19;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
This lesson discusses various aspects of affective illnesses and their causes and treatment. The method used in this lesson is the presentation of material followed by one or more questions.
none;none;nursing students

ANXIOUS PATIENT: SIMULATED CARE PROGRAM (nursing15;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
This lesson is a patient care problem about an anxious patient. The goal of the lesson is to apply principles of intervention for an anxious patient. The format of the problem is an opening scene followed by a number of sections where you are required to make a decision about intervention, after which you will be informed of the consequences.
none;none;nursing students

THE DEPRESSED PATIENT: A SIMULATED PATIENT CARE PROBLEM 1 (nursing6;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. School, Chicago, Il.
This is a depressed patient care problem. The goal of the lesson is to apply principles of intervention for depressed patients. The format of the problem is an opening scene followed by a number of sections. In each section you are required to make a decision about intervention and you will be informed of the consequences of your action.
none;10-15 minutes;nursing students

THE DEPRESSED PATIENT: A SIMULATED PATIENT CARE PROBLEM 2 (nursing16;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. School, Chicago, Il.
This is a depressed patient care problem. The goal of the lesson is to apply principles of intervention for depressed patients. The format of the problem is an opening scene followed by a number of sections. In each section you are required to make a decision about intervention and you will be informed of the consequences of your action.
none;none;nursing students

NEUROSIS AND THE TREATMENT OF NEUROSIS (nursing8;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
The goal of this lesson is to understand neurosis and the methods of treating it. The method used is the presentation of materials followed by one or more questions on the material.
none;30-45 minutes;nursing students

Psychiatric nursing--Problems, exercises, etc.

REVIEW OF ANXIETY AND NEUROSIS (nursing18;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
This lesson is a review and self-test of the lessons on anxiety and neurosis. It is arranged in two parts:
a. Review of "Anxiety, Its Causes and Effects"
b. Review of "Neurosis and the Treatment of Neurosis"
none;none;nursing students

Psychology

Statistics

ANALYSIS OF VARIANCE (anova;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois

The purpose of this lesson is to introduce the concepts that are incorporated within the analysis of variance technique. Analysis of variance is a procedure by which the user can perform a test of significance among a set of means taken together to test whether the means are significantly different from one another.

none;none;college/university students

BINOMIAL DISTRIBUTION (elstat6;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois

This lesson deals with Binomial Distribution, which is a probability distribution for use with discrete random variables.

none;45-60 minutes;psychology students

THE CHI-SQUARE DISTRIBUTION AND GOODNESS OF FIT (elstat11;1974;1977)
Cohen, Jerry L
Psychology Department, University of Illinois

This lesson defines and discusses chi-square distribution and goodness of fit.

none;60 minutes;psychology students

CHI-SQUARE FOR ASSOCIATION (elstat11a;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois

In this lesson the student examines the statistical method, chi-square for association, as a means of determining if two classifications of a population are independent of one another.

none;60-90 minutes;psychology students

CORRELATION AND REGRESSION (elstat10;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.

This lesson describes correlation and regression, familiarizes the student with how scatter diagrams for different degrees should look and describes how correlation and regression are useful in formulating predictions.

none;open-ended;college/university students

CORRELATION AND REGRESSION ANALYSIS (reganal;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois

This lesson teaches the use of regressional analysis to find the functional relationship between two variables.

none;none;psychology students

MOMENTS ABOUT THE MEAN (elstat7;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson calculates the "moments about the mean" in order to describe the distribution of the data that the user has collected. The symbols to be used are listed and the user is furnished with definitions of the different operations.
none;open-ended;college/university students

MULTITRAIT MULTIMETHOD MATRICES (mmmatrixx;1974;unpublished)
Cohen, Jerry L; Klesh, John R
Psychology Department, University of Illinois
This lesson teaches the use of Multitrait Multimethod Matrices as a somewhat idealized procedure for validating measurement instruments. The matrix contains all of the intercorrelations which result when each of several traits is measured by each of several methods.
none;none;psychology students

PERMUTATIONS AND COMBINATIONS (elstat8;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson deals with permutations, the products of consecutive positive integers and combinations.
none;open-ended;college/university students

PSYCHOLOGY STATISTICS PACKAGE (elstat0;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois, Urbana
This lesson provides an index that accesses lessons dealing with statistics useful in the study of psychology. All of the lessons have been developed at the University of Illinois.
none;open-ended;college/university students

RELIABILITY AND VALIDITY (elstat4;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson deals with two very important properties of any instrument that is used to measure important information -- reliability and validity.
none;none;college/university students

SAMPLING DISTRIBUTIONS (elstat3;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson discusses sampling distribution, a theoretical probability distribution which expresses the relationship between each possible sample result and the population values.
none;none;college/university students

STATISTICAL CONCEPTS FOR HYPOTHESIS TESTING (hypotesx;1974;unpublished)
Cohen, Jerry L; Lintern, Gavan
Psychology Department, University of Illinois
This lesson deals with statistical methods as they are used to summarize numerical data and infer characteristics of populations from sample data.
none;none;psychology students

STATISTICAL HYPOTHESIS TESTING (elstatx;1974;unpublished)
Cohen, Jerry L; Shaw, Marilyn
Psychology Department, University of Illinois
This lesson treats hypothesis testing, assuming that one hyposthesis is true and stating an alternative hypothesis for test purposes.
none;none;psychology students

TRANSFORMATION, Z-SCORES AND THE NORMAL CURVE (elstat9;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson presents information about transformations and furnishes the formula for finding z-scores. Then the user is introduced to the normal curve and creates examples of his own.
none;open-ended;college/university students

WELCOME TO DESCRIPTIVE STATISTICS (pstat;1974;1976)
Cohen, Jerry L
Psychology Department, University of Illinois
The purpose of Descriptive Statistics is to summarize and condense a data distribution for a better understanding of the meaning of the data set.
none;2 hours;psychology students

Psychology--Experiments

THE ASCH STUDY (asch;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois
This program is a hypothetical social psychology experiment involving judgement of lines, giving the the student a chance to obtain a more accurate understanding of what occurs. After performing certain tasks under controlled conditions, conclusions about the phenomenon under study are based on the performance of a substantial number of subjects.
none;none;high school/college psychology students

MULTIPLE PROBABILITY LEARNING EXPERIMENT (mpl;1974;unpublished)
Cohen, Jerry L; Grohne, Thomas
Psychology Department, University of Illinois
This lesson simulates a racetrack and is an experiment to test the user's ability to use information in making predictions of future events. The information supplied will be quite similar to the information supplied at a horse racing track.
none;open-ended;college/university students

SHORT-TERM MEMORY EXPERIMENT (stm;1974;unpublished)
Cohen, Jerry L; Vondruska, Richard
Psychology Department, University of Illinois
This lesson is a short-term memory experiment in which the user will be shown a series of digits from 1 to 9 at a fairly rapid rate. The task will be to remember the digits in serial order and then recall the numbers.
none;open-ended;college/university students

VERBAL & NONVERBAL MEMORY FOR SEQUENTIAL INFORMATION (vondruska;1977;1978)
Vondruska, Richard; Cohen, Jerry L
Psychology Department, University of Illinois
This psychology lesson concerned with imagery, is an experiment designed to investigate the two modes of thought -- verbal and nonverbal -- and how they are employed in a task which requires memory for sequential information.
pencil and paper;10 minutes;college level psychology students

Psychoses

AFFECTIVE ILLNESS AND THEIR CAUSES AND TREATMENT (nursing19;1976;unpublished)
Layton, Janice M
College of Nursing, U of I Med. Center, Chicago, Il.
This lesson discusses various aspects of affective illnesses and their causes and treatment. The method used in this lesson is the presentation of material followed by one or more questions.
none;none;nursing students

Public utilities

GOVERNMENT REGULATION LESSON 1 -- PUBLIC UTILITY ACCOUNTS (magg;1978;unpublished)
Maggs, Peter B; Platt, Robert C
College of Law, University of Illinois, Urbana, Ill.
This lesson gives law students without previous accounting training the necessary background to understand more advanced instructional materials on legal regulation of public utilities. It covers the distinction between debt and equity, the calculation of profit and return on investment, and the calculation of operating expenses and depreciation.
none;25-50 minutes;second or third year law students

Public utilities--Rates

UTILITY REGULATION LESSON 2 -- RATEMAKING SIMULATION (maggl;1979;unpublished)
Maggs, Peter B; Morgan, Thomas D; Platt, Robert C
College of Law, University of Illinois, Urbana

This simulation is designed to provide the law student with a minimum knowledge of the basic accounting and legal rules governing the regulation of rates charged by public utilities. The user plays the role of a young law graduate hired by the State Utility Commission, whose job involves making a series of decisions in the ratemaking proceedings of a phone company.

none;60 minutes;law students, business students

Publications (PLATO)

ARTICLES ABOUT THE PLATO SYSTEM (articles;1976;1977)
Lyman, Elisabeth R
Comp.-based Educ. Res. Lab., University of Illinois

This program is a bibliography of articles on the PLATO system and related subjects arranged for viewing alphabetically by author, by broad subject headings or chronologically by date of publication.

none;open-ended;everyone

Puerperium

LAMAZE CHILDBIRTH PREPARATION (lamaze;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.

This lesson on the Lamaze method contains a description of the phases of labor, description and explanation of the Lamaze technique for phases of labor, description and explanation of the Lamaze techinique for delivery and a simulated case history.

none;20 minutes;nursing students

POSTPARTUM (postpartum;1976;1979)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland Col., Champaign, Ill.

The lesson on postpartum nursing instructs the nursing student in the technique of checking a postpartum mother, comparing her condition to normal expectations in several areas and determining whether any problems exist and what the proper care for the problems might be.

touch panel;30-45 minutes;students of maternity nursing

Pulmonary circulation

CIRCULATORY DISORDERS OF THE RESPIRATORY SYSTEM (congest;1976;unpublished)
Perrymore, W. Dale; McCraw, Gordon W; Leveridge, C. Tony
Oklahoma University Health Sciences Center

This lesson covers pathological and clinical aspects of various circulatory diseases of the respiratory system. Included are CPC, cor pulmonale, pulmonary embolism, edema infarcation and hypertension. The material is presented in a highly indexed outline format, facilitating access to each specific area.

optional touch panel;30 minutes;first year medical students

INFANT PULMONARY CIRCULATION (pulmon;1976;1978)
Tymchyshyn, Pat; Helper, Jean
Life Science Div., Parkland College, Champaign, Ill.

The lesson reviews the development of the blood circulation in a newborn baby. The circulatory path of the blood is illustrated by drawings on the PLATO screen. The student is shown the differences between fetal and infant circulation and is tested on the information acquired.

none;10 minutes;nursing students

PULMONARY EMBOLISM (shp44;1975;unpublished)
Russell, Lawrence
Sheppard Air Force Base, Texas

This lesson defines the terms associated with pulmonary embolism, describes the difference between pulmonary circulation and systemic circulation, lists the sequence of events which can follow pulmonary embolism, and discusses the treatment and prevention of the disease.

none;2 hours;physicians' assistants

PULMONARY FUNCTION TESTING (shp93;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas

This lesson discusses specific tests which assess a patient's pulmonary function. The student is given a chance to practice interpreting test results for some hypothetical patients.

none;90 minutes;physicians' assistants

Pulmonary edema

CIRCULATORY DISORDERS OF THE RESPIRATORY SYSTEM (congest;1976;unpublished)
Perrymore, W. Dale; McCraw, Gordon W; Leveridge, C. Tony
Oklahoma University Health Sciences Center

This lesson covers pathological and clinical aspects of various circulatory diseases of the respiratory system. Included are CPC, cor pulmonale, pulmonary embolism, edema infarcation and hypertension. The material is presented in a highly indexed outline format, facilitating access to each specific area.

optional touch panel;30 minutes;first year medical students

Pulmonary embolism

CIRCULATORY DISORDERS OF THE RESPIRATORY SYSTEM (congest;1976;unpublished)
Perrymore, W. Dale; McCraw, Gordon W; Leveridge, C. Tony
Oklahoma University Health Sciences Center

This lesson covers pathological and clinical aspects of various circulatory diseases of the respiratory system. Included are CPC, cor pulmonale, pulmonary embolism, edema infarcation and hypertension. The material is presented in a highly indexed outline format, facilitating access to each specific area.

optional touch panel;30 minutes;first year medical students

PULMONARY EMBOLISM (shp44;1975;unpublished)
Russell, Lawrence
Sheppard Air Force Base, Texas
This lesson defines the terms associated with pulmonary embolism, describes the difference between pulmonary circulation and systemic circulation, lists the sequence of events which can follow pulmonary embolism, and discusses the treatment and prevention of the disease.
none;2 hours;physicians' assistants

Pulmonary embolism--Prevention

PULMONARY EMBOLISM (shp44;1975;unpublished)
Russell, Lawrence
Sheppard Air Force Base, Texas
This lesson defines the terms associated with pulmonary embolism, describes the difference between pulmonary circulation and systemic circulation, lists the sequence of events which can follow pulmonary embolism, and discusses the treatment and prevention of the disease.
none;2 hours;physicians' assistants

Pulmonary function tests

PULMONARY FUNCTION TESTING (shp93;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson discusses specific tests which assess a patient's pulmonary function. The student is given a chance to practice interpreting test results for some hypothetical patients.
none;90 minutes;physicians' assistants

Pulmonary hypertension

CIRCULATORY DISORDERS OF THE RESPIRATORY SYSTEM (congest;1976;unpublished)
Perrymore, W. Dale; McCraw, Gordon W; Leveridge, C. Tony
Oklahoma University Health Sciences Center
This lesson covers pathological and clinical aspects of various circulatory diseases of the respiratory system. Included are CPC, cor pulmonale, pulmonary embolism, edema infarcation and hypertension. The material is presented in a highly indexed outline format, facilitating access to each specific area.
optional touch panel;30 minutes;first year medical students

Pupil (Eye)

THE PUPILLARY LIGHT REFLEX (puflex;1974;unpublished)
Silver, John; Marshall, Arvle E; Helper, Lloyd C
College of Veterinary Medicine, Univ. of Illinois
This lesson provides five clinical cases illustrating the pupillary light reflex. Completion of the lesson should enable the student to test the pupillary light reflex and use that knowledge in assessing blindness and the extent of some types of lesions.
none;none;students of veterinary medicine

Purine metabolism

PURINE METABOLISM (goutl;1977;unpublished)
Ahasic, Thomas; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides a discussion of purine synthesis and catabolism with particular emphasis on processes which are of immediate concern for the understanding of various disease states and the mechanism of effect of certain pharmacologic agents.
none;30 minutes;first year medical students

Purine synthesis

PURINE METABOLISM (goutl;1977;unpublished)
Ahasic, Thomas; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides a discussion of purine synthesis and catabolism with particular emphasis on processes which are of immediate concern for the understanding of various disease states and the mechanism of effect of certain pharmacologic agents.
none;30 minutes;first year medical students

Purines

NUCLEIC ACIDS I: STRUCTURES AND BIOCHEMICAL CHARACTERISTICS (mnuc;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents the nomenclature, properties, structures and uses of the common "bases," nucleosides and nucleotides. Some purine and pyrimidine derivatives with therapeutic uses are also covered. This material is divided into four instructional sections each followed by a set of informative questions.
none;30 minutes;first year medical students

Pyrimidine metabolism

PYRIMIDINE METABOLISM (gout2;1977;unpublished)
Ahasic, Thomas; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides a discussion of the metabolism and catabolism of pyrimidine nucleotides. Special emphasis is given to those processes which are of immediate concern for the understanding of certain disease states.
none;30 minutes;first year medical students

Pyrimidines

NUCLEIC ACIDS I: STRUCTURES AND BIOCHEMICAL CHARACTERISTICS (mnuc;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois

This lesson presents the nomenclature, properties, structures and uses of the common "bases," nucleosides and nucleotides. Some purine and pyrimidine derivatives with therapeutic uses are also covered. This material is divided into four instructional sections each followed by a set of informative questions.

none;30 minutes;first year medical students

Quantum mechanics

ALPHA AND BETA DECAY AND Q (ENERGY) OF REACTION (cb6;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois

The lesson contains exercises for the student in which a nucleus is selected and from the nuclear mass data a determination can be made as to whether the nucleus can alpha-decay or beta-decay. The energy (Q) of the reaction can also be found.

none;none;students of elementary modern physics

THE HEISENBERG UNCERTAINTY PRINCIPLE (heisenberg;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

The lesson gives practice in exercises on wave packets and the Heisenberg Uncertainty Principle. Definitions, notation, comments and hints for the exercises and subsequent analysis are included.

none;none;college/university students

INFINITE SQUARE-WELL POTENTIAL (infinite;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

The lesson presents the properties of infinite square-well wave functions and energies. Graphical representations illustrate the explanations.

none;none;college/university students of modern physics

NUCLEAR DECAY PROCESSES (decay;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois

The program is one which by means of animated graphics allows the student to study nuclear decay processes.The determination of the half-life of processes is an end result.

none;none;students of elementary modern physics

PARTIAL DIFFERENTIATION AND THE WAVE EQUATION (waveqn;1973;1978)
Bennett, Carol D
Physics Department, Universtiy of Illinois
The lesson contains exercises on solutions of the "wave equation" by partial differentiation. After the student has finished the exercises, he/she must complete a quiz of three problems in order to obtain credit for completing the lesson.
none;none;students of modern physics or quantum mechanics

QUANTUM NUMBERS IN ATOMIC PHYSICS (atomic;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
The lesson explains the quantum numbers associated with wave functions and gives the rules pertaining to the quantum numbers. A timed drill and practice set of exercises in identification of the n,l,m atomic quantum numbers for a given system completes the lesson.
none;none;students of modern physics and quantum mechanics

Quantum theory

see Quantum mechanics

Racemization

REACTIONS OF ALDEHYDES AND KETONES (PART 2) (ketone2;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson continues the discussions of reactions of aldehydes and ketones.The subjects include enolization, H-D exchange, halogenation of ketones, and aldol condensation reactions with appropriate problems.
none;55 mminutes;college/university students

Radiation

POLARIZERS -- FILTERS OF COHERENT ELECTROMAGNETIC RADIATION (polarize;1973;unpublished)
Bennett, Carol D
Physics Department, University of Illinois
The lesson provides a tool for working problems having to do with polarizers. A review of the properties of polarizers is presented and then the student is asked to do several exercises based on these properties. A template is given with help for working problems on 1 to 3 polarizers.
none;none;students of elementary physics

Radicals (Chemistry)

FREE RADICAL HALOGENATION REACTIONS (radical;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson illustrates the mechanism of free radical chlorination and bromination of alkanes and shows how to calculate the heats of reactions from bond energies.
none;57 minutes;college/university students

Radius

HUMAN SKELETAL SYSTEM: PART VI - THE ARM (skelsys6;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the arm and forearm. The surfaces, borders and markings of the humerus, radius and ulna are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

Radius--Fracture

BRACHIUM: CLINICAL APPLICATIONS AND DRILL (antebrl;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

In this quiz lesson, the student is asked to identify gross anatomical structures of the forearm. PLATO graphics are used as the source for questions. Bone fractures and a knife puncture are used in this practical anatomy approach.

none;15 minutes;first year medical students

Rapid reading

RAPID READING (readrapid;1979;unpublished)
Bator, Robert; Wedel, Eric; Sweany, Joan
Olive-Harvey College, Chicago, Illinois

This lesson tests the user's normal reading speed of everyday material and explains what the average speed should be. The reasons for developing variable speed in reading are discussed as well as methods for breaking habits that slow down reading speed. Reading selections and quizzes (100-800 wpm) are provided from which the user may choose.

none;60 minutes;none

Ratio and proportion

INTRODUCTION TO RATIOS (ratios;1976;1978)
Lederman, Barbara
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

This lesson provides a short introduction to mathematical ratios.

none;10 minutes;basic mathematics students

Reactivity (Chemistry)

ACID BASE REACTIONS: PRACTICE PROBLEMS (abprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson consists of a series of practice problems on acid-base reactions.

touch panel;13 minutes;college/ university freshmen

Reading

RAPID READING (readrapid;1979;unpublished)
Bator, Robert; Wedel, Eric; Sweany, Joan
Olive-Harvey College, Chicago, Illinois

This lesson tests the user's normal reading speed of everyday material and explains what the average speed should be. The reasons for developing variable speed in reading are discussed as well as methods for breaking habits that slow down reading speed. Reading selections and quizzes (100-800 wpm) are provided from which the user may choose.

none;60 minutes;none

Reading comprehension

PACER PASSAGES I-XIII (;1979;unpublished)
Siegel, Martin A; Bruner, Elaine C; Maggs, Bruce M
PLATO Corrections Project, CERL, Univ. Of Ill.

The Pacer Passages lessons are based on an idea used in the PLATO Elementary Reading Project. Each individual lesson was modified for adolescent and adult learners, and written to help the student improve reading comprehension, to learn new facts, and to give the student practice in answering questions on those facts.

none;13 hours ;third - eighth grade level readers

PCP READING COMPREHENSION I-IV (reading1;1977,78;unpublished)
Siegel, Martin A; DiBello, Louis V; Bruner, Elaine C; et al.
PLATO Corrections Project, CERL, Univ. of Ill.

The PCP Reading Comprehension Program was developed for the adolescent and adult learner whose reading ability ranges between third and eighth grade. Skills in information finding and paraphrasing are developed through the use of several question and answer strategies. Students can enter at one of four levels, progressing through ten parts at each level.

none;20 hours;third - eighth grade level readers

READING AND COMPREHENSION LESSONS (resl1;1976;unpublished)
Pech, William; Berger, Michael
Div. of English as a Second Language, Univ. of Ill.

There are ten lessons in the Reading and Comprehension series available for students studying English as a Second Language. The lessons are "resl1" through "resl10". Each lesson consists of six or seven paragraphs to be read and then questions are to be answered on each one.

none;variable;foreign students improving their English

WORDSTUDY I-VI (voc;1977,78;unpublished)
Siegel, Martin A; Becker, Ruth R; Gilpin, Mariellen O; et al.
PLATO Corrections Project, CERL, Univ. of Ill.
These vocabulary tutorials and drills were developed for adolescent and adult students with low performance abilities. There are six parts, each part containing five lessons with two sections. Given a base word, the student is quizzed until he knows a meaning for that word. Then various forms of that base word are explored and used in used in sentences.
none;25 hours;third - eighth grade level readers

Reading (Elementary)

ELEMENTARY READING ON PLATO IV (readindex;1977;1978)
Corielle, Priscilla J; Yeager, Robert F; Fillman, Lezlie A; et al.
Comp.-based Educ. Res. Lab., University of Illinois
The elementary reading curriculum addresses basic de-coding skills and presents many basic words thru a "sightword" format and several interesting games. There are also some miscellaneous story formats. Heavy use is made of the audio device, since children at this level cannot read any instructions.
touch panel, audio, microfiche;2-3 min. segments, 30 hours;K-1st grade

PACER PASSAGES I-XIII (;1979;unpublished)
Siegel, Martin A; Bruner, Elaine C; Maggs, Bruce M
PLATO Corrections Project, CERL, Univ. Of Ill.
The Pacer Passages lessons are based on an idea used in the PLATO Elementary Reading Project. Each individual lesson was modified for adolescent and adult learners, and written to help the student improve reading comprehension, to learn new facts, and to give the student practice in answering questions on those facts.
none;13 hours ;third - eighth grade level readers

PCP READING COMPREHENSION I-IV (reading1;1977,78;unpublished)
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PLATO Corrections Project, CERL, Univ. of Ill.
The PCP Reading Comprehension Program was developed for the adolescent and adult learner whose reading ability ranges between third and eighth grade. Skills in information finding and paraphrasing are developed through the use of several question and answer strategies. Students can enter at one of four levels, progressing through ten parts at each level.
none;20 hours;third - eighth grade level readers

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Siegel, Martin A; Becker, Ruth R; Gilpin, Mariellen O; et al.
PLATO Corrections Project, CERL, Univ. of Ill.
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none;25 hours;third - eighth grade level readers

Reasoning

CATEGORY (think;1974;unpublished)
Vojacek, Joe
Chicago City-Wide Colleges, Malcolm X
The lesson is designed to make the student aware of his powers of reasoning . He is given basic instructions which he must apply in order to obtain correct answers. There are nine separate puzzles to solve.
none;30 minutes;any students of English

Recreational games

Air warfare

AIRFIGHT (airfight;1976;1976)
Fortner, Brand
Comp.-based Educ. Res. Lab., Univ. of Ill.
A game of three-dimensional combat simulation in which a dogfight is staged among jet fighters. The object of the game is to shoot down a member of the opposing team.
none;open-ended;general

DOGFIGHT (dogfight;1976;1977)
Green, Douglas Jay; White, Lawrence A
Comp.-based Educ. Res. Lab., University of Illinois
An interterminal air war game in which one player flies a small plane and tries to shoot down his opponent's plane. Each move is 45° which is the range between the arrow keys. The speed of moving the plane is dependent on how fast the arrow keys are pressed. A fast press is a tight turn, a slow press is a slow turn.
none;open-ended;general

FISHWAR (fishwar;1976;1977)
Berger, Michael; Frye, G. David; Little, Todd
University of Illinois, Urbana, IL
Fishwar is an interterminal airwar simulation in which two players try to shoot each other down.
none;open-ended;general

MOONWAR (moonwar;1973;1977)
Bloomfield, Louis
Urbana High School, Urbana IL

This is an interterminal warfare game in which one player challenges another player to shoot down a target with a laser beam. The player first to manoeuver into a position so that he can call the angle of his shot correctly to hit the target wins. The laser bounces off the smooth walls of the screen, but not off the four rough mountains in his way.

none;open-ended;anyone

SPACE WAR (spacewar;1978;unpublished)
Blomme, Richard W
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

This is a space warfare game to be played between two terminals. The players' ships are represented by X and O; the ship's speed, direction and firing is manipulated by the keyset.

none;open-ended;anyone

STARFIGHT (starfight;1977;1978)
Anderer, David G; Laubach, Mark
PLATO Project, University of Delaware, Newark, Del.

The game, "starfight", must be played on a programmable PLATO terminal. It involves two ships, the Glassors and the Errows. Each ship can fire torpedos at each other. The first player to get 7 kills wins. The players manipulate the directions of their ships as well as the detonation of the torpedos by keys on the keyset.

programmable plato terminal required;open-ended;any age

Board games

BACKGAM (backgam;1976;1977)
Boggs, Stephen H
Control Data Corporation

This program is a computer version of the standard game of backgammon in which dice are thrown and stones are moved around a board.

none;open-ended;general

BINGO (bingo;1978;1978)
Midden, Marshall; Nortrup, Kevin
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.

This computerized version of Bingo can be played alone or with others on the system.

none;open-ended;general

CHECKERS (checkers;1977;unpublished)
Blomme, Richard W
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This is a computerized version of the game Checkers. The user may either play against PLATO (an easy opponent) or move both black and white pieces himself.
optional touch panel;open-ended;anyone

CHECKMATE (mate;1974;unpublished)
Vondruska, Richard
University of Illinois, Urbana IL
This lesson attempts to familiarize the student with the use of algebraic chess notation, which is being used as an alternative to English descriptive notation, and to teach the student elementary checkmates.
none;open-ended;general

GO (playgo;1976;1977)
Pavicic, Mark Joseph
Dept. of Elec. Engineering, U. of Illinois
This game is a solitaire and an interterminal version of the standard game of GO in which territory on a board is gained and protected by "stones" placed on the board and moved by the players. In the solitaire version, the opponent is PLATO.
none;open-ended;general

HI-Q (hiq;1975;unpublished)
Polin, Glenn M
University of Illinois, Urbana, Illinois
In this computerized version of the game Hi-Q, pieces may be jumped horizontally and vertically but not diagonally. The object of the game is to end up with only one piece left on the board.
none;open-ended;general

ROSE (rose;1976;1978)
Sleator, Daniel; Sleator, Tycho
University of Illinois
The first three sections of this lesson generate rose patterns. The final four sections are games: Conway's Game of Life; X,Y Equation Solver Game; Morse Battle Game; Brain-o-Battle.
none;open-ended;none

TIC TAC TOE (TOUCH PANEL) (tictac;1977;1978)
Walker, Michael
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
The user plays against PLATO in this touch panel version of tic tac toe.
touch panel;open-ended;general

WELCOME TO CHESS (ychess1;1972;1978)
Thomasson, James; Weast, Gordon
University of Illinois, Urbana, Illinois
The time honored game of chess has been implemented on the PLATO system. Many options are given: playing against the computer, the computer playing various strengths; playing against another person at the same or at a different terminal; playing by 'mail'(leave between moves); playing blind or crazy chess; looking at selected famous games.
none;variable;anyone interested in the game of chess

YOTA (yota;1977;unpublished)
Maggs, Gregory
University of Illinois
Yota is a traditional solitaire game for all ages. The object of the game is to remove all of the pieces until there is only one left. If there is more than one piece on the board and no moves left, the game is lost.
touch panel;open-ended;general

Card games

CALCULATION (calculate;1977;1978)
Entwistle, William C
Institute of Aviation, Univ. of Illinois, Urbana, Ill.
This is a game of solitaire in which one builds twelve cards on each of four foundations in arithmetic sequence. Cards are turned up one by one and either played on foundation piles or discarded on waste piles. Strategy is involved in stacking cards on waste piles so as to optimize for their later removal.
optional touch panel;variable;anyone

CONTRACT BRIDGE (contract;1976;1977)
Wolff, Martin; Woolley, David R
Comp.-based Educ. Res. Lab., University of Illinois
This is an on-line version of Contract Bridge which can be played between terminals and/or the computer.
none;open-ended;none

FREE CELL (freecell;1979;unpublished)
Alfille, Paul
School of Basic Medical Sciences, Univ. of Illinois
This is a thinking game of Solitaire involving strategy, for the single player.
none;open-ended;general

POKER (poque;1977;unpublished)
Hansen, Wilfred J
Computer Science Dept., U of I, Urbana, Ill.
This lesson teaches a practical appreciation of psychology and probability by involving the student in a game of poker. The game played is five card stud. There may be up to eight players and up to seven of these may be simulated by PLATO. There are subtle differences in the behaviors of the various PLATO players.
none;open-ended;general

Games of chance

THE DICE GAME (noise4;1976;1978)
Smith, Larry; Bernstein, Norman R
University of Illinois, Urbana, Illinois
This game involves the rolling of three dice and deciding, on the basis of the roll total, whether or not the third die has a blank or its number showing.
none;open-ended;general

THE TRUCKING GAME (deutsch;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
In this game, the user engages in a battle of wills with PLATO. The user manages the Acme Trucking Company, PLATO manages the Bolt Trucking Company, and the object of the game is to deliver truckloads of highly perishable goods from warehouse to factory, all the while maximizing profits.
none;open-ended;college/university students

Games of strategy

FREE CELL (freecell;1979;unpublished)
Alfille, Paul
School of Basic Medical Sciences, Univ. of Illinois
This is a thinking game of Solitaire involving strategy, for the single player.
none;open-ended;general

THE GAME OF NIM (nim;1977;1978)
Resch, Paul
University of Illinois, Urbana, Ill. and Chicago, Ill.
This is a game based on logic and strategy. The player removes matches from piles of matches until none remain. The object of the game is to leave the opponent with the last match. Luck and strategy govern the outcome. The game may be played interterminally or monoterminally.
none;open-ended;everyone

THE ORTHANC LABYRINTH (orthanc;1977;unpublished)
Resch, Paul; Kemp, Larry; Hagstrom, Eric
University of Illinois and Indiana University

This program is a "dungeon" game. The player is placed in a "dungeon", a maze-like place where he/she may wander looking for treasure. Monsters guard treasure, however, and the player must use any talents for fighting and spell-casting he/she has.

none;open-ended;anyone

THE ORTHANC LABYRINTH (VERSION I) (orthancl;1976;unpublished)
Rutherford, Reginald; Resch, Paul; Kemp, Larry; et al.
University of Illinois, Urbana, Illinois

This program is PLATO's original dungeon game. The player wanders into a dungeon and tries to stay alive while finding treasure. The dungeon is protected by monsters.

none;open-ended;everyone

PANZERKRIEG (pzk;1976;1980)
Anderer, David G; Snellen, James E
University of Illinois, Urbana, Illinois

Panzerkreig is a game in which an attempt is made to simulate some aspects of tactical combat as they occurred in World War II.

none;open-ended;general

TOKEN SOLITAIRE (tokens;1977;1978)
Sherwood, Judith N
Computer-based Educ. Res. Lab., Univ. of Illinois

The game is a version of the game of "mastermind". The object of the game is to figure out how PLATO has hidden tokens underneath the solid squares which appear on the PLATO screen. There are four squares and six tokens. After each set of four choices, PLATO tells the player how well he/she guessed the location of the token.

touch panel;open-ended;for general recreational use

Puzzles

WELCOME TO CROSSWORD (crosswdn;1979;unpublished)
Melohn, Bill
University of Southern California

This lesson contains an on-line crossword puzzle. The puzzle is periodically changed and answers to the last puzzle are provided.

none;open-ended;general

Recreational games

Simulations

MULTIPLE PROBABILITY LEARNING EXPERIMENT (mpl;1974;unpublished)
Cohen, Jerry L; Grohne, Thomas
Psychology Department, University of Illinois

This lesson simulates a racetrack and is an experiment to test the user's ability to use information in making predictions of future events. The information supplied will be quite similar to the information supplied at a horse racing track.

none;open-ended;college/university students

THE ORTHANC LABYRINTH (orthanc;1977;unpublished)
Resch, Paul; Kemp, Larry; Hagstrom, Eric
University of Illinois and Indiana University

This program is a "dungeon" game. The player is placed in a "dungeon", a maze-like place where he/she may wander looking for treasure. Monsters guard treasure, however, and the player must use any talents for fighting and spell-casting he/she has.

none;open-ended;anyone

THE ORTHANC LABYRINTH (VERSION I) (orthancl;1976;unpublished)
Rutherford, Reginald; Resch, Paul; Kemp, Larry; et al.
University of Illinois, Urbana, Illinois

This program is PLATO's original dungeon game. The player wanders into a dungeon and tries to stay alive while finding treasure. The dungeon is protected by monsters.

none;open-ended;everyone

PANZERKRIEG (pzk;1976;1980)
Anderer, David G; Snellen, James E
University of Illinois, Urbana, Illinois

Panzerkreig is a game in which an attempt is made to simulate some aspects of tactical combat as they occurred in World War II.

none;open-ended;general

PLANETARY EXCURSION MODULE (pem;1978;1978)
Hall, Carl E
Center for Electron Microscopy, U of I, Urbana, Ill.

This lesson simulates real time landing of a "planetary excursion module" (PEM) on the user's choice of planets.

none;open-ended;general

THE TRUCKING GAME (deutsch;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
In this game, the user engages in a battle of wills with PLATO. The user manages the Acme Trucking Company, PLATO manages the Bolt Trucking Company, and the object of the game is to deliver truckloads of highly perishable goods from warehouse to factory, all the while maximizing profits.
none;open-ended;college/university students

YE OLDE ORIGINAL RACETRACK (racetrack;1973,76;1978)
Nievergelt, Jurg
Computer Science Department, University of Illinois
This lesson consists of five sections, two of which are the games "Ye Olde Racetrack" and "Maxwell's Demon." Both games are simulations and games of skill, with "Racetrack" being a game of speed, as well. Appropriate comments on the subject of simulations are included in a third section of the program.
none;open-ended;college

Speed games

ROSE (rose;1976;1978)
Sleator, Daniel; Sleator, Tycho
University of Illinois
The first three sections of this lesson generate rose patterns. The final four sections are games: Conway's Game of Life; X,Y Equation Solver Game; Morse Battle Game; Brain-o-Battle.
none;open-ended;none

YE OLDE ORIGINAL RACETRACK (racetrack;1973,76;1978)
Nievergelt, Jurg
Computer Science Department, University of Illinois
This lesson consists of five sections, two of which are the games "Ye Olde Racetrack" and "Maxwell's Demon." Both games are simulations and games of skill, with "Racetrack" being a game of speed, as well. Appropriate comments on the subject of simulations are included in a third section of the program.
none;open-ended;college

Sports

SWAT (swat;1977;1978)
Maggs, Bruce
University of Illinois
Swat is a table tennis game played between two players.
none;open-ended;anyone

Recursive programming

MINI PROGRAMMING SYSTEM: PLOTTING RECURSIVELY DEFINED CURVES (csmini;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Ill, Urbana, IL

The lesson provides a mini programming system which can be used to study recursive programs. The supported mini language is designed for simple curve plotting to show that a small program can generate complex graphics. Examples are provided of various types of curves such as Hibert, Sierpinski, and W curves.

none;open-ended;college or university students of computer science

MINI-PROGRAMMING SYSTEM FOR TREE & LIST MANIPULATION (cstrees;1976;1978)
Schreiner, Axel T
Computer Science Dept., Univ. of Ill., Urbana, IL

This lesson allows the student to define binary trees and linked lists in recursive terms and to write and simulate the execution of a program. The execution of the program is shown graphically. Six programs are provided as examples or the student may experiment with his own, altho' he cannot save his program when he exits from the lesson.

none;open-ended;college and university students studying computer science

A MINI-PROGRAMMING SYSTEM: FILING SYSTEM ADMIN. (csminiadm;1976;1978)
Schreiner, Axel T
Computer Science Department, Univ. of Illinois

The program is a utility to control the datasets used by the filing system developed for the mini programming system prototype, "csmini".

none;open-ended;college or university students of computer science

RECURSION IN PL/I (pl1recurse;1978;1978)
Milner, J. Michael
Comp. Sci. Dept., ACSES Project, Univ. of Ill.

The lesson addresses recursive procedures in PL/I, factorial examples, stacks, and automatic variables. There are appropriate exercises and drills for the students depending on the level of expertise of the users of the lessons.

none;25 hours for series;college/comm. or jr. col.

Reduction, Chemical

ALCOHOLS (roht;1977;1977)
Smith, Stanley
Chemistry Department, University of Illinois

The lesson teaches the common and IUPAC names of alcohols. It discusses the preparation by reduction of C=O, hydration, hydroboration, hydrolysis of HX, and Grignard additions. The reactions included are: oxidation, conversion to RX, dehydration, salt and ether formation.

none;89 minutes;college/university students

BALANCING OXIDATION-REDUCTION EQUATIONS (balredox;1975;1977)
Smith, Stanley
Chemistry Department, U. of Illinois, Urbana IL
The lesson introduces the concept of oxidation being a loss in electrons in a chemical reaction and reduction being a gain in electrons. The net transfer of electrons from one substance to another in a reaction being equal, two common methods for balancing equations are shown and problems using each method are given.
touch panel;31 minutes;college/university students

Reference books

WHAT CAN I FIND IN GENERAL REFERENCE BOOKS? (clibrary1;1978;unpublished)
Park, Chung I
Library, Malcolm X College, Chicago, Illinois
This lesson provides an overview of the different types and characteristics of general reference books found in libraries, enabling the student to develop ways of more efficiently searching for information.
none;60 minutes;community college/undergraduate students

Reflection (Optics)

EXERCISE WITH TWO PLANE MIRRORS (mirrors1;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois
Exercises are provided in locating the images of a given object produced by two perpendicular plane mirrors when the location of the images are found and marked. The appropriate rays are drawn on the PLATO screen. A HELP section contains a sample illustration.
none;none;students studying optics in elementary physics

Reflex, Tendon

MYSTERIOUS SPINAL CD. CASE I: THE TUMOR AND MRS. X (curtiss12;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the functional neuroanatomy of selected spinal cord tracts, deep tendon reflexes, and reflex arcs, with remedial instruction made available when key questions are missed. Also covered is the level localization of a spinal cord lesion.
optional touch panel;10-15 minutes;occup. therapy and med. students

Refraction

SIGN CONVENTIONS FOR MIRRORS, LENSES, REFRACTING SURFACES (optics1;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
In this lesson the student is shown various optical elements with an object and an image in varying positions. The exercises randomly generate a lens, mirror, or curved surface, draw the principal rays, and ask for the magnitude and signs of the focal length, object and image positions, and radius of curvature. The HELP section contains the "set of rules".
none;none;students of optics in elementary physics

Regressional analysis

CORRELATION AND REGRESSION (elstat10;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson describes correlation and regression, familiarizes the student with how scatter diagrams for different degrees should look and describes how correlation and regression are useful in formulating predictions.
none;open-ended;college/university students

CORRELATION AND REGRESSION ANALYSIS (reganal;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois
This lesson teaches the use of regressional analysis to find the functional relationship between two variables.
none;none;psychology students

Reproduction

see Human reproduction

Respiration

FUNCTIONAL MECHANICS OF VENTILATION (shp30;1974;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson dicusses the muscular-skeletal interaction in ventilation, the basic embryological development of the pleural cavity, respiratory pressures, pulmonary volumes and capacities, and alveolar ventilation.
none;4 1/2 hours;physicians' assistants

GAS TRANSPORT IN BLOOD (shp89;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas
This lesson focuses on the normal transport of respiratory gases in the blood.
none;2 hours;physicians' assistants

INTRODUCTION TO RESPIRATION AND VENTILATION (shp65;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson defines the processes of respiration and ventilation, illustrates the principles that explain how ventilation occurs, provides an introduction to the anatomical components of the respiratory system, and introduces the topographical anatomy of the lungs.
none;60-90 minutes;physicians' assistants

Respiratory distress syndrome

ATELECTASIS AND RESPIRATORY DISTRESS SYNDROME OF THE NEWBORN (rds;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of atelectasis and respiratory distress syndrome of the newborn. An outline format is used, with review questions presented to assess the student's understanding of the material.
optional touch panel;none;first year medical students

Respiratory organs

PHYSICAL EXAMINATION OF THE RESPIRATORY SYSTEM (shp73;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson teaches the general organization of the respiratory system exam, the physiological principles upon which the examination is based and the interpretation of the findings in a respiratory system. The examination of the upper airway is not covered.
The student will need a stethoscope.;60 minutes;physicians' assistants

Respiratory organs--Anatomy

ANATOMY QUIZ: THE NECK (anaquiz6;1976;unpublished)
Gaburo, K; McCormick, R; Kahn, Madelyn I
School of Basic Medical Sciences, Univ. of Illinois
This lesson features five separate areas - each area presenting questions in a different format (e.g., multiple choice or matching). The content includes neck spaces, triangles, neural and blood supply, and ligaments and muscles. Student's score on the quiz is presented and evaluated.
none;15 minutes;first year medical students

Respiratory organs--Diseases

ATELECTASIS AND RESPIRATORY DISTRESS SYNDROME OF THE NEWBORN (rds;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of atelectasis and respiratory distress syndrome of the newborn. An outline format is used, with review questions presented to assess the student's understanding of the material.
optional touch panel;none;first year medical students

CIRCULATORY DISORDERS OF THE RESPIRATORY SYSTEM (congest;1976;unpublished)
Perrymore, W. Dale; McCraw, Gordon W; Leveridge, C. Tony
Oklahoma University Health Sciences Center
This lesson covers pathological and clinical aspects of various circulatory diseases of the respiratory system. Included are CPC, cor pulmonale, pulmonary embolism, edema infarcation and hypertension. The material is presented in a highly indexed outline format, facilitating access to each specific area.
optional touch panel;30 minutes;first year medical students

GRANULOMATOUS INFECTIONS OF THE RESPIRATORY SYST. (granuloma;1977;unpublished)
Leveridge, C. Tony; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center

This lesson covers the pathologic entities of pulmonary tuberculosis and sarcoidosis, as well as dealing with mycotic infections and coin lesions in the context of granulomatous conditions. The material is highly indexed, facilitating access to specific areas.

optional touch panel;none;first year medical students

HISTORY IN RESPIRATORY DISEASE (shp39;1974;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas

This lesson introduces the student to the symptoms of respiratory disease. The student is shown how to conduct a medical interview and the material is learned by taking a history from a simulated patient.

none;30 minutes;physicians' assistants

INFECTIOUS INFILTRATIVE LUNG DISEASE, PART I (shp129;1975;unpublished)
Stutz, David R; Russell, Lawrence
Sheppard Air Force Base, Texas

This lesson covers the history and the physical exam for patients with pneumonia.

none;45-60 minutes;physicians' assistants

INHALATIONAL LUNG DISEASES (inhal;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Lawrance, David P
Oklahoma University Health Sciences Center

This lesson covers the pathological and clinical aspects of inhalational lung diseases. Sections on pneumoconiosis, extrinsic allergic alveolitis and chemical pneumonitis are presented. These diseases are characterized by damage to the lungs caused by inhalation of dusts (organic or inorganic), fumes or noxious substances.

optional touch panel;none;first year medical students

MICROLOGUE II: GRAM POSITIVE COCCI, PART I (microlog2a;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson discusses the group of bacteria classified as gram positive cocci. The study includes patient dialogue and the pathophysiology and etiology of upper respiratory infections. A discussion of stains used in microbiology is also included.

none;15 minutes;first year medical students

MICROLOGUE II: GRAM POSITIVE COCCI, PART II (microlog2b;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson continues the discussion of the gram positive cocci begun in Part I. The patient dialogue is continued with specific consideration of staphylococcus, streptococcus and streptococcus pneumoniae. Characteristics and morphology of these organisms are studied as well as criteria for identification.
microfiche;20 minutes;first year medical students

NON-INFECTIOUS INFILTRATIVE LUNG DISEASE (shp103;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas
This lesson discusses non-infectious infiltrative lung diseases: the subjective and objective findings and the treatment principles.
none;45-60 minutes;physicians' assistants

PNEUMOTHORAX AND INTERSTITIAL EMPHYSEMA (pneumo;1977;unpublished)
McCraw, Gordon W; Lawrance, David P; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of interstitial emphysema and pneumothorax. The classification schema presented includes that favored by pathologists and that used by clinicians. The material is presented in a highly indexed outline format, facilitating access to specific areas.
optional touch panel;none;first year medical students

PROBLEM SOLVING IN CLINICAL MEDICINE: COUGH (feinz3;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 47-year-old man with a progressively worsening cough and shortness of breath. The user is a student physician working for an ambulatory care facility who has been assigned to this man. Choices are made from options provided and each selection is discussed.
none;none;medical students

UPPER AIRWAY DISEASE (shp96;1975;unpublished)
Seager, Brent C
Sheppard Air Force Base, Texas
This lesson defines upper airway disease, identifies disease processes that are associated with specific anatomical areas of the upper respiratory tract and describes the etiology of upper airway disease, the diagnostic features of the disease processes and the treatment.
This lesson requires 35mm slides.;2 hours;physicians' assistants

Respiratory organs--Radiography

X-RAY OF THE CHEST, PART I (shp54;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas
This lesson will teach the student to identify the proper xray view of the chest to meet the needs of a given situation.
slide set of xrays;20-30 minutes;radiologists

X-RAY OF THE CHEST, PART IV (shp98;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas
This lesson teaches the student to look at and read specific chest xrays.
This lesson requires slides of specific xrays.;60 minutes;radiologists

X-RAY OF THE CHEST, PARTS II AND III (shp60;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas
This lesson teaches the student to become familiar with the xray appearance of the bones of the thoracic cage, the mediastinum and the lungs.
none;45-60 minutes;radiologists

Respiratory organs--Tumors

TUMORS OF THE RESPIRATORY SYSTEM (1tumor;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of tumors of the respiratory system. Diagnostic criteria and possible hormonal syndromes are also considered. A highly indexed outline format is utilized with questions presented to help assess the student's understanding of the material.
optional touch panel;none;first year medical students

Rhyme

see Rime

Ribonucleic acid synthesis

DNA AND PROTEIN SYNTHESIS (xcell;1968;unpublished)
Tenczar, Paul J
Comp.-based Educ. Res. Lab., University of Illinois
This two part lesson begins with a summary and introduction to DNA, RNA, the genetic code and protein synthesis. If the basics are already understood, the student may go directly to part two. In part two, three amino acids and the corresponding m-RNA codes are provided and the student must determine the DNA and t-RNA codes needed to synthesize the protein.
none;30-60 minutes;first year biology students

Ribs

HUMAN SKELETAL SYSTEM: PART I - THE THORAX (skelsys2;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thorax. Surfaces, borders and markings of the sternum, costal cartilages, and typical and atypical ribs are illustrated and described. Boundaries of the thoracic inlet and outlet are defined. Directions for palpating subcutaneous parts of these bones are included. There is a post-test.

none;20 minutes;first year medical students

Rime

RHYME (rime;1978;unpublished)
Vojacek, Joe
Malcolm X College, Chicago, Illinois

This lesson gives the student practice in recognizing and understanding what makes full, part, and symbolic rhyme. In full and part rhyme, the student learns by creating rhyme himself; in symbolic rhyme, he learns through abstract analysis.

none;60 minutes;students of poetry and literature

Romanticism in music

ROMANTIC ERA COMPOSERS (mus421g;1977;1978)
Watanabe, Nan T; Fonder, Mark; Rassier, Daniel A
Music Department, U of I, Urbana, Ill.

This is a thirty-item quiz on the Romantic Era composers. There are three clues available for each question to aid the user in supplying the correct answer.

none;none;general

Root-locus method

CONTROL SYSTEMS ANALYSIS (rootlocus;1976;1979)
Beck, Howard W
Dept. of Elec. Engineering, U of I, Urbana, Ill.

The techniques used in this lesson are designed for the analysis of a basic closed loop configuration with unity feedback. The program is useful as a utility program for engineering mathematics.

none;open-ended;engineering and mathematics students

Runes

RUNES (futhark;1978;unpublished)
Hinton, Norman
Sangamon State University

The lesson describes Runes, common German writing systems used in Northern Europe between the 3rd and 13th centuries. It contains lists of characters with their meanings and passages of literature, prose and poetry, written with the runic characters.

none;10-15 minutes;high school, college, university graduate students

Running

BIOMECHANICS OF RUNNING (pe10;1974;unpublished)
Reece, Robert M; Dillman, Charles J
Physical Education Department, U of I, Urbana, Ill.
This lesson teaches the user to manipulate various parameters which determine the speed at which a sprinter is able to run the 100 meter dash. Background material and definitions are provided.
none;1-2 hours;persons interested in the study of biomechanics

INTRODUCTION TO CROSS-COUNTRY RUNNING (pe9;1974;unpublished)
Reece, Robert M; Dillman, Charles J
Physical Education Department, U of I, Urbana, Ill.
This lesson deals with cross-country running and presents the fundamentals, techniques, rules and types of training for running. The terminology is also discussed.
none;60 minutes;persons interested in cross-country running

Russian language--Orthography and spelling

THE CYRILLIC ALPHABET (ralph1;1976;1977)
Curtin, Constance O; Dawson, Clayton L
Comp.-based Educ. Res. Lab., University of Illinois
This lesson will acquaint the student with the Cyrillic alphabet and help in providing practice in reading Russian words.
audio discs;4 hours (4 lessons);high sch/college/university

Russian language--Reading

RUSSIAN READING SERIES (rdm1a;1976;1977)
Curtin, Constance O; Dawson, Clayton L; Cooper, Philip A; et al.
Comp.-based Educ. Res. Lab., University of Illinois
These lessons concern Russian grammar, vocabulary, common expressions, simple arithmetic and numbers, dates and measurements.
none;two semesters, 89 hours;high school/college

Sales accounting

TERMS OF SALE (discount;1978;unpublished)
McKeown, James C; Lenehen, Thomas
Department of Accountancy, U of I, Urbana, Ill.
This lesson familiarizes the student with various terms of sale and allows them to compute invoice price discounts and freight charges.
none;30-45 minutes;introductory accounting students

Sampling (Statistics)

SAMPLING DISTRIBUTIONS (elstat3;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson discusses sampling distribution, a theoretical probability distribution which expresses the relationship between each possible sample result and the population values.
none;none;college/university students

Sarcoidosis

GRANULOMATOUS INFECTIONS OF THE RESPIRATORY SYST. (granuloma;1977;unpublished)
Leveridge, C. Tony; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathologic entities of pulmonary tuberculosis and sarcoidosis, as well as dealing with mycotic infections and coin lesions in the context of granulomatous conditions. The material is highly indexed, facilitating access to specific areas.
optional touch panel;none;first year medical students

NON-INFECTIOUS INFILTRATIVE LUNG DISEASE (shp103;1975;unpublished)
Russell, Lawrence; Stutz, David R
Sheppard Air Force Base, Texas
This lesson discusses non-infectious infiltrative lung diseases: the subjective and objective findings and the treatment principles.
none;45-60 minutes;physicians' assistants

Scales, Musical

INTRODUCTION TO SCALES (musfund4;1976;1977)
Beiermann, Dennis J
School of Music, University of Illinois
This lesson is designed to teach a student all about major scales --- what they are, how they're constructed. Practice in building some scales is also given in this lesson.
none;none;university

Scales (Weighing instruments)

A SIMULATION OF AN ANALYTICAL BALANCE (balance;1977;unpublished)
Moore, Carolynn
Chemistry Department, University of Illinois
This lesson is a simulation of an analytical balance. It provides the student with the opportunity to practice weighing samples.
touch panel;none;college/university students of elementary chemistry

USING THE BALANCE (weight;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson describes a common type of chemical balance, the Mettler Balance. Practise problems in reading the balance are presented.
microfiche;34 minutes;college/university students of elementary chemistry

Scapula

HUMAN SKELETAL SYSTEM: PART V - SHOULDER GIRDLE (skelsys5;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This osteology lesson presents the bones of the shoulder girdle. Surfaces, borders and markings of the clavical and scapula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.
none;20 minutes;first year medical students

A QUIZ ON THE SCAPULA (scapula;1977;unpublished)
Miller, David B; McCraw, Gordon W
School of Basic Medical Sciences, Univ. of Illinois
This quiz lesson tests the student's knowledge of all gross anatomical structures impinging upon the scapula, including origins, insertions, innervations, and actions of the muscles, bony landmarks and their functions, and the major vascular channels.
none;15 minutes;first year medical students

Scatchard plot analysis

SCATCHARD ANALYSIS (scatch;1977;unpublished)
Gorback, Michael S
School of Medicine, Univ. of Maryland, Baltimore
This lesson gives the average medical reader or student sufficient understanding of the basics of Scatchard analysis to comprehend scientific investigation based on this type of receptor analysis. It draws an analogy between Scatchard Analysis and the similar, but more familiar Michaelis-Menten Kinetics.
none;10 minutes;first year medical students

Science--Experiments

EXPERIMENTAL TECHNIQUE (ecos;1975;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson presents the universally accepted procedure for the acquisition of scientific knowledge and analyzes the steps in the process, with conversions between English and metric measures included.
none;45 minutes;college/university students

LIFE IN A MICROCOSM (ecos2;1975;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson helps the student to evaluate hypotheses and experimental designs for their potential to yield a sound conclusion, and to interpret results of research accurately.
none;20 minutes;college/university students

Science--Methodology

EXPERIMENTAL TECHNIQUE (ecos;1975;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson presents the universally accepted procedure for the acquisition of scientific knowledge and analyzes the steps in the process, with conversions between English and metric measures included.
none;45 minutes;college/university students

LIFE IN A MICROCOSM (ecos2;1975;unpublished)
Haney, Alan W; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson helps the student to evaluate hypotheses and experimental designs for their potential to yield a sound conclusion, and to interpret results of research accurately.
none;20 minutes;college/university students

Science--Notation

SCIENTIFIC NOTATION (scienot;1976;1978)
Lederman, Barbara; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and exercises on scientific notation.
none;10-15 minutes;high school students and above

SLIDE RULE (srl;1976;1978)
Lederman, Barbara; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and practice in the use of a slide rule for multiplication and division problems.
slide rule;3.5 hours;students of technical math or physical science

Sedatives

CNS PHARMACOLOGY: SEDATIVES AND HYPNOTICS (kumcl9;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson discusses the general chemistry and pharmacology of sedative-hypnotics. Those treated are primarily barbiturates, certain anithistamines, chloral hydrate, ethchlorvynol, glutethamide, methaqualone and other clinically pertinent sedative-hypnotic agents.
none;10 minutes;first year medical students

Seeds--Germination

INTRODUCTION TO SEED GERMINATION (morphogen;1973;1980)
Wolniak, Steven; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the processes of seed germination and dormancy and defines the optimum conditions for seed germination.
none;30-40 minutes;college/university students

Seeds--Morphology

INTRODUCTION TO SEED GERMINATION (morphogen;1973;1980)
Wolniak, Steven; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the processes of seed germination and dormancy and defines the optimum conditions for seed germination.
none;30-40 minutes;college/university students

Seeds--Viability

INTRODUCTION TO SEED GERMINATION (morphogen;1973;1980)
Wolniak, Steven; May, Gary N
Botany Dept., U of I, Urbana, Ill.
This lesson describes the processes of seed germination and dormancy and defines the optimum conditions for seed germination.
none;30-40 minutes;college/university students

Serology

COMPARATIVE SEROLOGY (serology;1974;unpublished)
Hyatt, Gary; Eades, David C
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses "open-ended" investigatory techniques to allow students to build two phylogenetic dendograms for taxa of insects and taxa of mammals. The quantitative method employed for making relational decisions is the blood serum precipitin test.
none;60 minutes;university/college zoology students

Service programs

Communication

PLATO AND YOU (zpstories;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Whole Numbers Elem. Math. Group
The lesson explains how PLATO communicates with the student. It teaches the student to differentiate between the roles of the computer and the programmer.
none;four ten minute segments;upper level elementary students

PLATO NOTEFILE DRIVER (pmrnotes;1978;unpublished)
Resch, Paul
Comp.-based Educ. Res. Lab., Univ. of Illinois
The program is a -use-able notefile driver. It is about as efficient as the system "group notes". It has a slightly different method of storage, so uses fewer words and allows more notes to be stored. The user must provide his own dataset or nameset. The driver resides in a normal TUTOR file. Both background and foreground options are available.
none;open-ended;any PLATO user

TALKOMATIC (talkomatic;1976;1977)
Brown, Douglas W; Woolley, David R
Comp.-based Educ. Res. Lab., University of Illinois
A multi-terminal communication program in which there are six channels of communication each holding five persons. It is possible to protect a channel so that only those persons may be added who have the approval of those already using the channel, or to lock out anybody else. A single channel variation of "talkomatic" is "minitalko".
none;open-ended;general

WELCOME TO ITALK (italk;1975;unpublished)
Gold, Loren; Friedman, H. George
Department of Computer Science, University of Illinois
This lesson provides a means of on-line communication between instructor and student. One or two instructors may use the lesson at one time and it has the capacity for four student users. The instructors see all of the conversations; the student sees only his/her own conversation.
none;open-ended;instructors

Data management

FILES MANAGEMENT SYSTEM (fmanage;1976;1978)
Boggs, Stephen H
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This is a record keeping system which contains a list of names (usually filenames) that the user specifies. These names can be placed into a maximum of 13 user designated categories. Up to 2 variable length records can be attached and these editable records, containing any kind of text, can be searched. Security is sign-on name/course based.
none;open-ended;none

LEAST SQUARES ANALYSIS (lstsq;1978,79;unpublished)
Oberle, Timothy T
Dept. of Chemical Engineering, University of Illinois
This is a lesson designed to fit data to linear and non-linear functions. There are six options available and the user can either enter data directly into this lesson or plot data stored in another lesson. Detailed explanation and instructions are provided.
none;open-ended;scientists and engineers

STAT PACKAGE (stat;1980;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois

This utility statistics package is data-oriented rather than procedure-oriented in that data is usually entered in an option especially designed for it rather than in a general data-editor. This means that it is possible to provide appropriate analyses automatically even if the user is unfamiliar with a particular statistical technique.

none;open ended;general audience

STAT PACKAGE: CHI-SQUARE AND CLASSIFICATION TESTS (stat5;1977,80;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains options I and J of the package. Option I provides 2×2 classification tables and option J has the larger classification tables, going up to 10×10 categories.

none;open-ended;general audience

STAT PACKAGE: CORRELATED DATA OPERATIONS (stat9;1977,80;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains option F of the package. Option F provides for paired data, which consists of correlation, regression, curve-fitting, correlated t-tests, and t-tests with covariance adjustment.

none;open-ended;general audience

STAT PACKAGE: DESCRIPTIVE STATISTICS (stat7;1977,80;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains option D of the package, descriptive statistics. Given a list of data of any length, it computes the mean, range, variance and s.d., and Σx and Σx 2. For up to 100 items it also provides median, average deviation, histogram, rank ordering, and transformations of the raw data. Data may also be transformed automatically upon entry.

none;open-ended;general audience

STAT PACKAGE: FACTORIAL ANALYSIS OF VARIANCE (stat3;1977,80;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains option K of the package, which is analysis of variance. This provides 1- to 3-way factorial analysis of variance with up to 32 cells and fixed or random factors. It gives an ANOVA summary table with MS, F, df, and probability for each effect and mean, s.d., and n for any combination of treatment and level.

none;open-ended;general audience

STAT PACKAGE: MULTIPLE COMPARISONS, PARTIAL CORRELATION (stat6;1977,80;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson contains options G and L of the package. Option G provides multiple comparisons of sets of from 1-14 groups from a total of up to 18 groups. Option L contains partial correlation. From first-order correlations between 3 variables, it computes correlation between 2, with the effects of the third variable statistically removed.
none;open-ended;general audience

STAT PACKAGE: MULTIPLE CORRELATION (stat4;1977,80;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson contains option M of the package, multiple correlation, which gives missing-data correlations for up to 6 variables at a time with no limit on sample sizes.
none;open-ended;general audience

STAT PACKAGE: NONLINEAR REGRESSION, CONFIDENCE INTERVALS (stat8;1977,80;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson contains options H and O of the package. Option H has a nonlinear regression feature, showing the graphic relationship between predictor and criterion for up to 85 groups. Option O contains confidence intervals for commonly used statistics.
none;open-ended;general audience

STAT PACKAGE: PRESTORED DATA OPERATIONS (stat10;1977,80;unpublished)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides the prestored data option (TERM/data), permitting pre-storing of up to 32 sets (with up to 960 values each) in datasets for subsequent processing. Analysis options include descriptive statistics, _t_-tests for independent groups, paired data, multiple comparisons, nonlinear regression, analysis of variance and multiple correlation.
none;open-ended;general audience

STAT PACKAGE: PROBABILITY DISTRIBUTIONS (stat2;1977,80;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson contains option N, probability distributions. It gives the probability point to 6 decimal places for values from normal, _t_, chi-square, _F_, binomial, poisson, negative exponential, and _r_ distributions. This option also gives values corresponding to probability points in the range of .001 to .999 for normal, _t_, _F_, and chi-square distributions.
none;open-ended;general audience

STAT PACKAGE: RAW DATA OPERATIONS, INDEPENDENT T TESTS (stat1;1977,80;1977)

Avner, Richard A

Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains options C and E of the package. Option C provides for desk calculator manipulations of raw data and item scores. Option E contains *t* tests (independent samples), giving *t*, probability value, confidence intervals for difference in means, and estimated size of experimental effect.

none;open-ended;general audience

STAT PACKAGE: TOLERANCE LIMITS AND POWER ANALYSIS (stat;1977,80;1977)

Avner, Richard A

Comp.-based Educ. Res. Lab., University of Illinois

This lesson provides options A, B, P and Q of the package. Option A contains general information and instructions on entering data. Option B contains option descriptions and helps direct a new user to an appropriate option. P offers tolerance limits and option Q, statistical power analysis.

none;open-ended;general audience

SUPERVISOR - A FILE MANAGER (supervisor;1976;1978)

Berger, Michael

University of Illinois

This lesson stores file names and descriptions and allows cross-referencing for retrieval.

none;open-ended;none

TRANSFERRAL OF DATA (transfr;1978;unpublished)

Fisher, Norman R

Comp.-based Educ. Res. Lab., Univ. of Illinois

The program gives instructions to help TUTOR authors transfer data between many types of databases, i.e. datasets and namesets.

none;open-ended;PLATO authors and instructors

Editor programs (PLATO)

ANIMEDITOR VERSION 2.0 (animatic;1976;1977)

Frye, G. David

University of Illinois

The ANIMeditor allows one to write animated notes which are not subject to the idiosyncracies of system editors.

The program is an "MFL Tag Team Presentation."

none;open-ended;any PLATO author

COMEDIT - GENERAL PURPOSE COMMON EDITOR (commedit;1977;unpublished)
Duncombe, Kevet
Iowa State University, Ames, Iowa
This general purpose common editor provides most of the features of the system common editor. It allows inspection and editing of information stored in full words or segments and also provides for search, find, transfer, zero, abort and return of the common.
none;open-ended;PLATO authors

DATASET EDITOR (dedit;1976;unpublished)
Fumento, David P; Maslikosa, Marianne M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson provides a good editor which anyone can use with their own lessons which require code in a source format, commonly an assembler or an interpreter. Several options are available through this lesson which are not a standard part of the TUTOR editor and are accessed by pressing SHIFT-DATA from the "What Dataset?" page.
none;open-ended;authors of PLATO lessons

DATASET SEARCH (dsearch;1976;unpublished)
Galcher, William M
University of Illinois
This utility program can search files which are in "dedit" type format.
none;open-ended;authors of PLATO lessons

DEDIT FILE PRINT FORMATTER (dprint;1976;unpublished)
Galcher, William M
University of Illinois
This lesson is designed to provide the user with the ability to format a "dedit" type dataset so that it may be printed by the system printer.
none;open-ended;authors of PLATO lessons

DISPLAY DESIGN EDITOR (dservhelp;1975;unpublished)
Halvorsen, Timothy; Resch, Paul
Comp.-based Educ. Res. Lab., U of I, Urbana
This service utility allows the user to design various graphics or text displays.
none;open-ended;PLATO lesson authors

FILE MODIFICATION SCAN (modscan;1978,79;1979)
Williams, Steven R
Comp.-based Educ. Res. Lab., Univ. of Illinois
This lesson provides the author with a means for scanning files for changes via file modwords. Information returned from scanning may be either screen displayed or sent to a nameset, specially formatted for printing.
none;open-ended;lesson authors

LESSON ACCESS CONTROLLER (accessedit;1978;unpublished)
Roper, William D
Southern Illinois University, Carbondale, IL

The program contains the access editor used by the Lesson Access Controller. The instructions on how to use the editor may be found in lesson "accesscode".

none;open-ended;PLATO site directors

NEWSPAPER (newspapers;1977;1978)
Sinder, Dale R
Electrical Engineering Department, Univ. of Illinois

This is a program allowing an author to generate a newspaper containing up to 62 articles, 40 active at one time. The articles may be indexed and cross referenced for search and retrieval. Any number of people may contribute articles to the newspaper. Limited authoring rights may be given to all PLATO users without revealing the common code.

none;open-ended;any PLATO author

Notefiles (PLATO)

PLATO NOTEFILE DRIVER (pmrnotes;1978;unpublished)
Resch, Paul
Comp.-based Educ. Res. Lab., Univ. of Illinois

The program is a -use-able notefile driver. It is about as efficient as the system "group notes". It has a slightly different method of storage, so uses fewer words and allows more notes to be stored. The user must provide his own dataset or nameset. The driver resides in a normal TUTOR file. Both background and foreground options are available.

none;open-ended;any PLATO user

Numerical analysis

COMPUTE (compute;1976;1979)
Fries, Keith L
Dept. of Electrical Engineering, Univ. of Illinois

This program is a service utility designed to provide the user with convenient, user-oriented calculating routines for real valued systems. Help sequences are available throughout the lesson.

none;open-ended;university/college students

Physics

ERROR ESTIMATES IN ARITHMETIC OPERATIONS (cb9;1974;1978)
Bennett, Carol D
Physics Department, University of Illinois

This lesson illustrates errors in arithmetic operations. It defines types of error, gives exercises in determining the accumulated error in numbers (a+b), (a-b), (a×b), (a÷b) and describes the difference between correlated and uncorrelated errors. The order of study of each type of error is optional.

none;none;anyone involved in accurate arithmetic measurements

GRAFIT PROGRAMMING FACILITY (grafit;1971;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
GRAFIT is a programmable calculator which graphs the results. The program provides a simple programming language with inherent graphical output, designed to assist science students to compute and graph results for small calculations. The program is a general service type program, not a lesson.
none;open-ended;college/university science students

MINI-CALCULATOR (calca;1975;1978)
Bennett, Carol D
Physics Department, University of Illinois
The program is a utility program providing a small calculator without user-defined functions; it includes real or complex numbers, random numbers, and array operations.
none;open-ended;students in mathematics, physics, and other sciences

NUMERICAL ANALYSIS UTILITY (calc;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
This is a utility program to aid in numerical analysis. The program provides an elaborate calculator and x-y function plotter with user-defined functions A-Z and variables a-z.
none;open-ended;students of mathematics and physics

Service programs

PLATO student bulletin board

ON-LINE STUDENT BULLETIN BOARD (bulletin;1975;1977)
Friedman, H. George
Department of Computer Science, University of Illinois
Instructions are given as well as a program for setting up an on-line student bulletin board for use with student courses.
none;none;students in a PLATO course

Teaching

CORRECTIVE FEEDBACK PARADIGM (cfp;1975;unpublished)
Siegel, Martin A; Misselt, A Lynn; Tatsuoka, Kay
PLATO Education Group, CERL, Univ. of Illinois
This is a program giving a corrective feedback and criterion teaching model for PLATO drills. It is a model which is very different from standard drill routines. It features: 1) review positions for items "missed", 2) specification of criterion for number of times correct answers must be given, 3) discrimination training and feedback on items confusing user.
none;open-ended;teachers interested in designing drill routines using PLATO

MULTIPLE CHOICE QUIZ CONSTRUCTION (muchoq;1976;1978)
Kraatz, James M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson allows an instructor to make up a multiple choice quiz without the need to know TUTOR authoring.
none;open-ended;instructors

Set theory

INTRODUCTION TO SETS (ccset;1976;1978)
Weaver, Tamar A; DiBello, Louis V
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides an introduction to set theory including a discussion of sets, subsets, elements of a set, and the three operations: union, intersection, and complementation.
none;20 minutes;intermediate algebra students

Sex chromatin

CHROMOSOMES AND KARYOTYPING, PART I (chrom;1975;unpublished)
Chirolas, Darlene
School of Basic Medical Sciences, Univ. of Illinois
This lesson describes the characteristics and classification of chromosomes and presents the standard human karyotype symbols and notation. Eight syndromes are explained along with the karyotype notation and clinical signs for each. Barr bodies and the Lyon hypothesis are also discussed.
microfiche;30 minutes;first year medical students

Sex education

see Sex instruction

Sex instruction

OBSTETRICIAN-GYNECOLOGIST AS SEX EDUCATOR (sexed;1978;unpublished)
Lavanhar, Patricia; Pepper, George; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development
This lesson covers six areas of physical diagnosis where the practitioner can be of service to the patient in sex education: attitude, history, physical pelvic exam, etc. The format is highly interactive, involving essay, true/false, short answer and multiple choice questions. A pretest and post-test enable measure of learning.
none;30-45 minutes;medical students

Shields

HERALDRY (heraldry;1978;unpublished)
Banks, Fred; Dillier, Norman; Dionesotes, Dean
University of Illinois, Urbana, Illinois
Heraldry is the feudal art of symbolism for both personal and family identification. This program deals with the basics of "heraldic" design and terminology as applied to the shield. A bibliogaphy of books on the subject is also included in the lesson.
touch panel;none;general audience

Shoulder girdle

HUMAN SKELETAL SYSTEM: PART V - SHOULDER GIRDLE (skelsys5;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the shoulder girdle. Surfaces, borders and markings of the clavical and scapula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;20 minutes;first year medical students

Signed numbers

ADDING AND SUBTRACTING ON THE NUMBER LINE (signum;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson introduces the number line, the negative numbers, and teaches order on the number line. It also teaches a number line model of adding and subtracting signed numbers and includes practice problems.

none;45 minutes;basic mathematics students

ADDING AND SUBTRACTING SIGNED NUMBERS (post;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana IL

This lesson is a model for the operation of addition and subtraction of signed numbers to enable the students to work with statements like +3 - -2 = +5.

none;10 minutes;elementary mathematics students

ADDITION OF SIGNED NUMBERS (signadd;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson introduces the number line and negative numbers and teaches order on the number line. It also presents a number line model of adding signed numbers and practice problems of the same.

none;35 minutes;basic mathematics students

ADDITION, SUBTRACTION AND MULTIPLICATION OF SIGNED NUMBERS (bank;1974;1978)
Cohen, Donald; Glynn, Jerry; Weaver, Tamar A; et al.
Comp.-based Educ. Res. Lab., University of Illinois

This lesson teaches arithmetic of signed numbers and provides practice in adding and multiplying of signed numbers.

none;60 minutes;basic mathematics students

DIVISION OF SIGNED NUMBERS (divide;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., Univ. of Illinois
The lesson presents an introduction and practice on division of signed numbers.
none;10 minutes;basic mathematics students

DOUBLE SIGNS (FLIPPING) AND MULTIPLICATION (PATTERNS) (signmult;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides a concrete visual model for getting rid of double signs and a simple introduction to the rules for multiplying signed numbers.
none;15 minutes;basic mathematics students

EXERCISES -- ADDING AND SUBTRACTING (signprac;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides drill practice in adding and subtracting signed numbers and a posttest for these skills.
none;30 minutes;basic mathematics students

INTRODUCTION -- THERMOMETER, SEA LEVEL (signex;1976;unpublished)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson presents a quick and easy introduction to the number line and signed numbers by using temperature and sea level.
none;5-10 minutes;basic mathematics students

MULTIPLICATION (run;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches multiplication of signed numbers by using a concrete visual model -- the running man.
none;45 minutes;basic mathematics students

MULTIPLICATION OF SIGNED NUMBERS (postmult;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This lesson is a model for the operation of multiplication of signed numbers to enable the student to work with statements like $+2 \times -3 = -6$.
none;10 minutes;elementary mathematics students

SIGNED NUMBER WORD PROBLEMS ON TEMPERATURE AND SEA LEVEL (wordp;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson offers practice with word problems involving subtraction of signed numbers.
none;15 minutes;basic mathematics students

SUBTRACTING SIGNED NUMBERS (signsub;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches a number line model of subtracting signed numbers and offers practice.
none;25 minutes;basic mathematics students

Singing--Diction

EXERCISES IN VOCAL DICTION (musvocal;1976;1978)
Gieszelman, Diane L; Sanders, William H
Music Department, University of Illinois
The lesson is designed to provide an introduction to the vocal articulators and their uses. It is intended as a supplement to any textbooks or reference books on the subject.
none;none;music students taking voice instruction

Skin tests

ALLERGENS--THEIR NATURE AND DISTRIBUTION (shp75;1975;unpublished)
Roseman, Gerald J
Sheppard Air Force Base, Texas
In this lesson the student will learn what substances are allergens, where allergens are commonly found, when people are exposed to allergens and how response to allergens varies.
none;30-45 minutes;physicians' assistants

Skin--Inflammation

PHYSICIAN SELF-ASSESSMENT V (psa05;1974;unpublished)
Esterly, N.; Solomon, Lawrence; Chen, Thomas; et al.
Abraham Lincoln School of Medicine, Univ. of Illinois
In this simulation, a 28-year-old woman comes to the doctor complaining of a rash on her hands. The student must diagnose her problem and treat her condition.
microfiche, optional touch panel;none;medical students

Slaughtering and slaughter-houses

ANTEMORTEM AND POSTMORTEM INSPECTION PROCEDURES (apip;1974;unpublished)
Grimes, George M; Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois
The purpose of the lesson is to help the student learn how to perform antemortem and postmortem inspections using proper procedures in accordance with the U. S. Department of Agriculture regulations. The student should be able to recognize and prescribe humane slaughter procedures and proper facilities and equipment for making the inspections.
slide selector, microfiche;2 hours;students of veterinary medicine

Slide rule--Problems, exercises, etc.

SLIDE RULE (srl;1976;1978)
Lederman, Barbara; Lassner, David
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides instruction and practice in the use of a slide rule for multiplication and division problems.
slide rule;3.5 hours;students of technical math or physical science

Social groups

TRIADIC SITUATIONS (triads;1977;unpublished)
Woodman, William; Miller, Chuck; Battin, Jim
Iowa state University, Ames, Iowa
The purpose of this lesson is to teach the student, by means of a simulation, the principles of small group power dynamics.
none;none;college or university students in introductory sociology

Social psychology--Experiments

THE ASCH STUDY (asch;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois
This program is a hypothetical social psychology experiment involving judgement of lines, giving the the student a chance to obtain a more accurate understanding of what occurs. After performing certain tasks under controlled conditions, conclusions about the phenomenon under study are based on the performance of a substantial number of subjects.
none;none;high school/college psychology students

Sociology

BOSS, A MANAGEMENT SIMULATION (boss;1977;unpublished)
Woodman, William; Miller, Chuck; Battin, Jim
Iowa State University, Ames, Iowa
The program simulates a complex organization: Conglomeron, a mythical corporation in this case. The user is responsible for making decisions within a setting of various competing forces.
none;none;college or university sociology students

TRIADIC SITUATIONS (triads;1977;unpublished)
Woodman, William; Miller, Chuck; Battin, Jim
Iowa state University, Ames, Iowa
The purpose of this lesson is to teach the student, by means of a simulation, the principles of small group power dynamics.
none;none;college or university students in introductory sociology

Sodium in the body

MACROMINERALS (macmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson presents information about macrominerals, or those minerals required in the human diet in amounts exceeding 100 mg. per day. The macrominerals are calcium, phosphorus, magnesium, potassium, sodium, sulphur and chlorine.
none;25-30 minutes;nutrition students

Soil moisture

SOIL WATER CALCULATOR (swinf;1976;unpublished)
Boast, Charles
Dept. of Agronomy, U of I, Urbana, Ill.
This lesson is a mathematical simulation of water retention and flow in soil. Variables are determined by the user and a scheme of nomeclature concerning the potential energy of water in soil is provided.
workbook;open-ended;agronomy and other agriculture students

Soil physics

SOIL WATER CALCULATOR (swinf;1976;unpublished)
Boast, Charles
Dept. of Agronomy, U of I, Urbana, Ill.
This lesson is a mathematical simulation of water retention and flow in soil. Variables are determined by the user and a scheme of nomeclature concerning the potential energy of water in soil is provided.
workbook;open-ended;agronomy and other agriculture students

Solmization

HAND SIGNALS - SOLMIZATION (emus2;1976;1977)
Flohr, John W
Music Department, U of Illinois, Urbana IL
This music lesson is designed to teach the use of hand signals as a visual aid in the development of singing. Solmization is the term for systems which designate the notes in a scale by syllables.
none;none;college/university

Solution (Chemistry)

LIQUID-LIQUID EXTRACTIONS (extract;1977;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.
The lesson outlines the procedures for simple and multiple extractions. The use of acids and bases in extractions is also discussed.
none;none;college and university students of organic chemistry

MOLECULAR WEIGHT DETERMINATION BY FREEZING POINT METHOD (freeze;1975;1978)
Ghesquiere, James R
Department of Chemistry, Univ. of Illinois
The lesson teaches the theory of freezing point depression when a solute is added to a solvent, and then the student performs a simulated experiment on the freezing point depression of benzene solutions.
none;81 minutes;students of general chemistry

SEPARATION OF CATIONS FROM SOLUTION (iqual;1973;unpublished)
Francis, Larry D
Computer-based Educ. Res. Lab., Univ. of Illinois
The lesson presents a simulated laboratory exercise to the student. He is given a mixture of four ions in the same test tube and is required to separate these into four test tubes by selective precipitation. He may review materials on the concepts of precipitation and access descriptions of reagents to gain information for appropriate test selections.
none;none;college/university students

SOLUTIONS -- CONCENTRATION (conc;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson deals with the use of units of concentration (dimensional analysis) in quantitative chemical work where most chemical reactions take place in solutions. Problems of increasing difficulty are presented particularly the kinds of problem common in chemistry laboratories.
none;46 minutes;college/university students

Space flight

ELEMENTARY AEROSPACE ENGINEERING GAMES (aerogames;1976;1977)
Bennett, James A; Bennett, Carol D
University of Illinois
A series of games that illustrate the types of problems that face aerospace engineers. Two types of problems are presented: airplane and spacecraft.
none;open-ended;general

Spain

Civilization

INTRODUCTION TO SPANISH CULTURE (spancult;1976;1976)
Armengol, Armando; Dutton, Brian
Spanish Department, University of Illinois
Part I traces the history of Spain. Part II deals with Spanish America, its colonization and development.

Lesson continued in -spancult2-.
none;2-2 1/2 hours;high school/college students

History

INTRODUCTION TO SPANISH CULTURE (spancult;1976;1976)
Armengol, Armando; Dutton, Brian
Spanish Department, University of Illinois
Part I traces the history of Spain. Part II deals with Spanish America, its colonization and development.

Lesson continued in -spancult2-.
none;2-2 1/2 hours;high school/college students

Spanish America

see Latin America

Spanish language

THE SPANISH LANGUAGE IN THE WORLD, PARTS I, II, & III (spcivil;1979;unpublished)
Marty, Fernand
French Department, University of Illinois
This lesson attempts to provide the user with some important historical information about the Spanish language, thereby promoting an understanding of the importance of Spanish in the present time.
none;45 minutes;persons interested in the Spanish language

Spanish language in America

THE SPANISH LANGUAGE IN THE WORLD, PARTS I, II, & III (spcivil;1979;unpublished)
Marty, Fernand
French Department, University of Illinois
This lesson attempts to provide the user with some important historical information about the Spanish language, thereby promoting an understanding of the importance of Spanish in the present time.
none;45 minutes;persons interested in the Spanish language

Spanish language in Asia

THE SPANISH LANGUAGE IN THE WORLD, PARTS I, II, & III (spcivil;1979;unpublished)
Marty, Fernand
French Department, University of Illinois
This lesson attempts to provide the user with some important historical information about the Spanish language, thereby promoting an understanding of the importance of Spanish in the present time.
none;45 minutes;persons interested in the Spanish language

Spanish language--Grammar

SPANISH VERB DRILLS (sverb1;1973;unpublished)
Armengol, Armando
Spanish Department, University of Illinois
These drills consist of three lessons designed to provide the student with practice in the use and conjugation of Spanish verbs.
none;4 hours;college/university students

Specific heat

PROPERTIES OF MATTER: SPECIFIC HEAT (calorie;1977;unpublished)
Moore, Carolynn
Chemistry Dept., Univ. of Illinois, Urbana, IL

The student is taught in this lesson to do a simulated experiment in which the specific heat of an unknown piece of metal is measured. The identity of the metal is determined from the knowledge gained of the value of its specific heat.

none;none;college or university students of general chemistry

Spectrophotometer

A TOOL: THE SPECTROPHOTOMETER (spectro;1973;1980)
May, Gary N; Novitzky, William P
Botany Dept., U of I, Urbana, Ill.

This lesson teaches the student to use a spectrophotometer and to interpret the data obtained from the instrument.

none;25 minutes;college/university students

Spectroscopy

see Nuclear magnetic resonance spectroscopy

Spectrum analysis

Nuclear magnetic resonance

NUCLEAR MAGNETIC RESONANCE (NMR) (SHORT VERSION) (nmr3short;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This lesson is a shortened version of "nmr3".
The lesson presents a review of the principles underlying the interpretation of NMR spectra, allows the student to work through sample problems and presents one set of problems in which the organic compounds are to be identified from their empirical formulas and their NMR spectra.

none;52 minutes;college/university students

NUCLEAR MAGNETIC RESONANCE (NMR): PART 1 (nmr1;1972;1977)
Smith, Stanley
Chemistry Department, University of Illinois

This lesson discusses NMR signals from protons, the recognition of types of protons in organic compounds, chemical shift and chemical shift scales.

none;29 minutes;college/university students

NUCLEAR MAGNETIC RESONANCE (NMR): PART 2 (nmr2;1972;1978)
Smith, Stanley
Chemistry Department, Univ. of Illinois, Urbana, Ill.

This lesson on nuclear magnetic resonance deals with proton spin-spin coupling and the n+1 rule. It allows the student to calculate AB and AB 2 spectra from J and values of the chemical shift.

microfiche;35 minutes;college and university chemistry students

NUCLEAR MAGNETIC RESONANCE (NMR): PART 3 (nmr3;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson presents a review of the principles underlying the interpretation of NMR spectra, allows the student to work through sample problems and presents three sets of problems in which the organic compounds are to be identified from their empirical formulas and their NMR spectra. The lesson requires a microfiche.
microfiche;102 minutes;college/university students

BRIEF INTRODUCTION TO IR SPECTROSCOPY (ir2;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a brief introduction to infrared spectroscopy and several practice problems in the recognition of the infrared spectrum of some common functional groups: alcohols, amines, aldehydes, ketones, and esters.
microfiche;51 minutes;college/university students

INTERPRETATION OF MASS SPECTRA (ms;1975;unpublished)
Murov, Steven L
Moorhead State University, Moorhead, Minnesota
The lesson presents the basic principles involved in mass spectrometry, takes the student through the stepwise analysis of four unknowns and then requires the student to carry out a stepwise analysis of an unknown which is a randomly selected substance.
none;none;college and university students of analytic chemistry

Spectrum analysis--Instruments

A TOOL: THE SPECTROPHOTOMETER (spectro;1973;1980)
May, Gary N; Novitzky, William P
Botany Dept., U of I, Urbana, Ill.
This lesson teaches the student to use a spectrophotometer and to interpret the data obtained from the instrument.
none;25 minutes;college/university students

Spectrum, Infra-red

BRIEF INTRODUCTION TO IR SPECTROSCOPY (ir2;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson presents a brief introduction to infrared spectroscopy and several practice problems in the recognition of the infrared spectrum of some common functional groups: alcohols, amines, aldehydes, ketones, and esters.
microfiche;51 minutes;college/university students

Speech, Disorders of

THE UNANSWERABLE WORD-LANGUAGE DYSFUNCTION (curtiss20;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson presents common patterns of language dysfunction secondary to organic brain damage, and a brief discussion of dysarthria.
optional touch panel;10-20 minutes;occup. therapy and med. students

Speech processing systems

ESPERANTO - A SHORT DEMONSTRATION USING VOTRAX (vespol;1978;unpublished)
Sherwood, Judith N
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson is a short introduction to Esperanto in which pictures appear on the screen and PLATO pronounces the name.
votrax speech synthesizer and touch panel;open-ended;general

GERMAN SENTENCE PARSER WITH SYNTHETIC SPEECH (hfgerman;1977;unpublished)
Feugen, Hugo Maarten
Comp.-based Educ. Res. Lab., Univ. of Illinois
Given a German sentence, this lesson breaks the words down into their constituent parts and applies phonological rules to produce a transcription of sounds in the International Phonetic Alphabet, which is displayed on the screen. The lesson also drives the Votrax VS-6 speech synthesizer.
Votrax VS-6 speech synthesizer;open-ended;persons interested in speech synthesis

INDEX TO VOTRAX DEMONSTRATIONS (vdemo;1978;unpublished)
Sherwood, Bruce Arne
Computer-based Educ. Res. Lab., Univ. of Illinois
The index of demonstration lessons which use the votrax speech synthesizer contains lessons of varying types so that the application of speech synthesis in a number of areas may be observed and heard. The programs for the votrax have been written at the University of Illinois.
votrax speech synthesizer;open-ended;persons interested in speech synthesis

PICTURE SHOW (VOTRAX VERSION) (vpix;1976;unpublished)
Risken, John; Yeager, Robert F; Kraatz, James M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson demonstrates the votrax speech synthesizer. Pictures are shown on the screen and the user touches the picture. PLATO pronounces the word in English, Spanish or Esperanto.
votrax speech synthesizer and touch panel;open-ended;general

PLATO V POETS' CORNER (vpoems;1974;unpublished)
Gooch, Sherwin J
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
By using this lesson and the votrax speech synthesizer, the user can hear PLATO recite three poems and a brain teaser. The words appear on the screen as the user listens.
votrax speech synthesizer;open-ended;general

SENTENCES (VOTRAX VERSION) (vsentences;1976;unpublished)
Yeager, Robert F; Sherwood, Bruce Arne
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson allows the user to generate simple sentences which PLATO will pronounce and animate.
votrax speech synthesizer and optional touch panel;open-ended;general

VOCABULARY DRILL (VOTRAX VERSION) (sayvoc;1978;unpublished)
Sherwood, Judith N; Sherwood, Bruce Arne
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson is a multi-lingual votrax vocabulary-picture drill. The drill can be done in English, Esperanto or Spanish.
votrax speech synthesizer and touch panel;open-ended;general

Spelling ability--Testing

SPELLING CORRECTIONS (spl;1974;unpublished)
Prince, Richard; Yamada, Mitsuru
Malcolm X College, Chicago, Illinois
This lesson trains the student to recognize and correct commonly misspelled words. One hundred fifty misspelled words are presented.
none;120 minutes;Students with spelling problems

SPELLING DIAGNOSTIC TEST (elds;1974;unpublished)
Magidson, Errol; Kraatz, James M
Kennedy-King College, Chicago, Illinois
This lesson provides a diagnostic test in spelling. Thirty-eight items from 27 categories cover the basic spelling rules.
none;40 minutes;Basic, especially GED students

SPELLING DRILL (spell;1974;unpublished)
Magidson, Errol; Yamada, Mitsuru
Kennedy-King and Malcolm X College, Chicago, Ill.
This lesson improves student's spelling through drill. Seven lists are provided; each list represents a different spelling rule (ie rules, doubling final consonants, etc.).
none;90 minutes;Students with spelling problems

SPELLING LESSONS - HIGH-LEVEL (hilevel1;1975;unpublished)
Intensive English Institute
Div. of English as a Second Language, Univ. of Ill.
The spelling lessons designed for use by students studying English as a Second Language provide a drill of high-frequency hard-to-spell words. The series "hilevel1" through "hilevel14" are high-level lessons. In each lesson, errors are anticipated and hints to the correct spelling are given. Words are seen, heard from the audio device, typed and judged.
audio device;variable;foreign students improving English

SPELLING LESSONS - LOW-LEVEL (spelling1;1975;unpublished)
Intensive English Institute
Div. of English as a Second Language, Univ. of Ill.

The spelling lessons designed for use by students studying English as a Second Language provide a drill of high-frequency hard-to-spell words. The series "spelling1" through "spelling14" are low-level lessons. In each lesson, errors are anticipated and hints to the correct spelling are given. Words are seen, heard from the audio device, typed and judged.

audio device;variable;foreign students improving English

Spelling games

ORDEAL OF THE HANGMAN (hangman;1976;1978)
Michael, Gary; Berger, Michael; Dennis, David; et al.
University of Illinois, Urbana, Illinois

The game is a spelling game, a version of the well-known game, HANGMAN, presented in an ancient setting in the year 433. Each player suspected of being a member of a secret cult must undergo an ordeal to prove his innocence, namely the spelling of 6 words without knowledge of what the words are. Failure to withstand the ordeal produces dire results!

none;variable;general

Spinal cord

INTRO. TO THE HUMAN NERVOUS SYSTEM: SPINAL CORD (nervsyst;1976;unpublished)
Wadsworth, Gladys E; Kroll, Martin
School of Medicine, University of Maryland, Baltimore

This lesson is composed of two subunits: part one identifies the three subsystems into which the nervous system is classified, and part two describes the fundamental external and internal structures of the spinal cord as well as the meniges and their relationship to each other. The sources of the blood supply to the spinal cord are discussed briefly.

none;35 minutes;first year medical students

MYSTERIOUS SPINAL CD. CASE III:NEUROGENIC BLAD. (curtiss14;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois

This lesson provides a review of the bladder emptying reflex, and differentiation between the flaccid and spastic neurogenic bladder.

none;5-10 minutes;students of occupational therapy, medical students

MYSTERIOUS SPINAL CD. CASE II: THE BROWN SEQUARD SYNDROME (curtiss13;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois

This lesson is a simulated case study of the expected findings in the Brown-Sequard Syndrome correlated with the functional neuroanatomical findings. If certain key questions are missed, remedial information is provided.

optional touch panel;5-15 minutes;occup. therapy and med. students

MYSTERIOUS SPINAL CD. CASE IV: ANTER. SPINAL ART. OCCLUSION
(curtiss15;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides review of the expected clinical findings of the anterior spinal artery occlusion syndrome, correlated with expected neuroanatomical defects.
none;5-10 minutes;students of occupational therapy, medical students

MYSTERIOUS SPINAL CD. CASE I: THE TUMOR AND MRS. X (curtiss12;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a review of the functional neuroanatomy of selected spinal cord tracts, deep tendon reflexes, and reflex arcs, with remedial instruction made available when key questions are missed. Also covered is the level localization of a spinal cord lesion.
optional touch panel;10-15 minutes;occup. therapy and med. students

SPINAL CORD ANATOMY, A CLINICAL APPROACH (curtiss5;1977;unpublished)
Dubrick, Anton J; Curtis, Brian A
Peoria School of Medicine of the Univ. of Illinois
This lesson covers basic cord anatomy, spinal nerve roots, discs, reflexes and major spinal tracts. A quiz and clinically oriented practice drills are included.
touch panel;15 minutes;first year medical students

SPINAL NERVE LESION (curtiss10;1978;unpublished)
Clausen, Sallyann; Adams, Lawrence J
Peoria School of Medicine, University of Illinois
This lesson provides a simulated case of a spinal nerve lesion with remedial information available when certain key questions are missed.
none;10-20 minutes;students of occupational therapy, medical students

Sporozoa

BACTERIAL TERMINOLOGY REVIEW: CELL MORPHOLOGY (microterm;1976;unpublished)
Wagner, Kenneth; Cohen, Barry; Stull, Richard
School of Basic Medical Sciences, Univ. of Illinois
The lesson reviews basic terminology associated with bacterial cell morphology. In a linear, interogative format, terms associated with internal bacterial cell structures, the bacterial cell envelope, bacterial cell appendages, and spore formation are presented or reviewed.
none;35 minutes;first year medical students

MED. PARASITOLOGY IV: PARASITIC SPOROZOANS (PART I): (sporz2;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
General sporozoan characteristics are briefly reviewed followed, in an interrogative linear format, by a relatively detailed presentation on the morphology, life cycle, laboratory diagnosis, pathogenicity, symptomatology and treatment of Babesia species and Toxoplasma gondii. A diagnostic review over parasitic sporozoans is also accessible.
none;5 minutes;first year medical students

MED. PARASITOLOGY V: PARASITIC SPOROZOANS (PART II) (sporz3;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
General sporozoan characteristics are briefly reviewed followed, in an interrogative linear format, by a presentation on the morphology, life cycle, laboratory diagnosis, pathogenicity, symptomology and treatment of Isospora species, Pneumocystis carinii and Sarcocystis lindemanni. A diagnostic review quiz over parasitic sporozoans is accessible.
none;5 minutes;first year medical students

MED. PARASIT. III: TYPICAL SPOROZOAN LIFE CYCLE (sporz1;1975;unpublished)
Wagner, Kenneth; Cohen, Paul; Bohn, Robert
School of Basic Medical Sciences, Univ. of Illinois
This module is designed to allow either a step-by-step explanation, utilizing PLATO graphics, of a life cycle exhibited in part or whole by members of the Sporozoa, or to allow a review of the material by taking a quiz over the terms, definitions, and sequences of the stages in the cycle.
none;5 minutes;first year medical or microbiology students

Square root

FINDING THE SQUARE ROOT (sqrt;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides three methods for finding square roots:
a. Guessing and Adjusting
b. Newton's Method
c. The Square Root Algorithm
none;30 minutes;basic mathematics students

Staphylococcal disease

GASTROINTESTINAL ILLNESS ABOARD AN AIRPLANE (plane;1976;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson relates an outbreak of staphylococcal food poisoning occurring among passengers on a commercial airliner. The material was extracted from a report originally published in "Morbidity and Mortality Weekly Reports," a report of the Center for Disease Control, Atlanta, Georgia. Questions about various aspects of food poisoning are asked in the lesson.
none;5 minutes;medical students

Staphylococcus

MICROLOGUE II: GRAM POSITIVE COCCI, PART II (microlog2b;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson continues the discussion of the gram positive cocci begun in Part I. The patient dialogue is continued with specific consideration of staphylococcus, streptococcus and streptococcus pneumoniae. Characteristics and morphology of these organisms are studied as well as criteria for identification.

microfiche;20 minutes;first year medical students

Stars

CONSTELLATION STUDY (cdcstar;1979;1979)
Avner, Elaine
Comp.-based Educ. Res. Lab., U of I, Urbana

This lesson on constellations will plot 23 constellations and provide certain information for each, i.e., latitude, hour angle, azimuth and altitude, as well as the names of major stars. There is a drill available. The user may also plot any constellation by providing information as to the position of the stars.

none;open-ended;grade 9 and over interested in study of constellations

Statistical hypothesis testing

STATISTICAL CONCEPTS FOR HYPOTHESIS TESTING (hypotesx;1974;unpublished)
Cohen, Jerry L; Lintern, Gavan
Psychology Department, University of Illinois

This lesson deals with statistical methods as they are used to summarize numerical data and infer characteristics of populations from sample data.

none;none;psychology students

STATISTICAL HYPOTHESIS TESTING (elstatx;1974;unpublished)
Cohen, Jerry L; Shaw, Marilyn
Psychology Department, University of Illinois

This lesson treats hypothesis testing, assuming that one hyposthesis is true and stating an alternative hypothesis for test purposes.

none;none;psychology students

Statistics

Chemical engineering

DATA ANALYSIS (chel3;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on the analysis of data, which are nothing more than a related group of numbers. This data can be useless as a raw numerical set, but by interpretation or restructuring it can be put in a more compact and readable form. In this lesson the user will be shown methods by which data analysis can be accomplished easily and efficiently.

none;23 minutes;sophomore students of chemical engineering

Medicine

STATISTICAL SIGNIFICANCE (statsig;1977;unpublished)
Hebel, Richard; Lovick, Chester
School of Medicine, Univ. of Maryland, Baltimore

This lesson presents statistical principles useful in assessing biomedical data. It emphasizes the use of statistical tests as well as the difference between the statistical significance of a result and its importance in practical application.

none;10 minutes;medical students

Music

AN INTRODUCTION TO "T" TEST (mustat;1976;1976)
Sanders, William H
School of Music, University of Illinois

The "t" Test is used to determine the significance of the difference between the means of two sets of scores. If you have given the same test to two of your classes and you wish to statistically compare the two sets of grades, the "t" Test is helpful.

pencil and paper; pocket calculator helpful;none;music research classes

Statistics

Psychology

ANALYSIS OF VARIANCE (anova;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois

The purpose of this lesson is to introduce the concepts that are incorporated within the analysis of variance technique. Analysis of variance is a procedure by which the user can perform a test of significance among a set of means taken together to test whether the means are significantly different from one another.

none;none;college/university students

BINOMIAL DISTRIBUTION (elstat6;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois

This lesson deals with Binomial Distribution, which is a probability distribution for use with discrete random variables.

none;45-60 minutes;psychology students

THE CHI-SQUARE DISTRIBUTION AND GOODNESS OF FIT (elstat11;1974;1977)
Cohen, Jerry L
Psychology Department, University of Illinois

This lesson defines and discusses chi-square distribution and goodness of fit.

none;60 minutes;psychology students

CHI-SQUARE FOR ASSOCIATION (elstat11a;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois
In this lesson the student examines the statistical method, chi-square for association, as a means of determining if two classifications of a population are independent of one another.
none;60-90 minutes;psychology students

CORRELATION AND REGRESSION (elstat10;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson describes correlation and regression, familiarizes the student with how scatter diagrams for different degrees should look and describes how correlation and regression are useful in formulating predictions.
none;open-ended;college/university students

CORRELATION AND REGRESSION ANALYSIS (reganal;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois
This lesson teaches the use of regressional analysis to find the functional relationship between two variables.
none;none;psychology students

MOMENTS ABOUT THE MEAN (elstat7;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson calculates the "moments about the mean" in order to describe the distribution of the data that the user has collected. The symbols to be used are listed and the user is furnished with definitions of the different operations.
none;open-ended;college/university students

MULTITRAIT MULTIMETHOD MATRICES (mmmatrixx;1974;unpublished)
Cohen, Jerry L; Klesh, John R
Psychology Department, University of Illinois
This lesson teaches the use of Multitrait Multimethod Matrices as a somewhat idealized procedure for validating measurement instruments. The matrix contains all of the intercorrelations which result when each of several traits is measured by each of several methods.
none;none;psychology students

PERMUTATIONS AND COMBINATIONS (elstat8;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson deals with permutations, the products of consecutive positive integers and combinations.
none;open-ended;college/university students

PROBABILITY (elstat2;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson will cover the basic definitions and rules in simple probability theory.
none;none;college/university students

PSYCHOLOGY STATISTICS PACKAGE (elstat0;1974;unpublished)
Cohen, Jerry L
Psychology Department, University of Illinois, Urbana
This lesson provides an index that accesses lessons dealing with statistics useful in the study of psychology. All of the lessons have been developed at the University of Illinois.
none;open-ended;college/university students

RELIABILITY AND VALIDITY (elstat4;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson deals with two very important properties of any instrument that is used to measure important information -- reliability and validity.
none;none;college/university students

SAMPLING DISTRIBUTIONS (elstat3;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson discusses sampling distribution, a theoretical probability distribution which expresses the relationship between each possible sample result and the population values.
none;none;college/university students

STATISTICAL CONCEPTS FOR HYPOTHESIS TESTING (hypotesx;1974;unpublished)
Cohen, Jerry L; Lintern, Gavan
Psychology Department, University of Illinois
This lesson deals with statistical methods as they are used to summarize numerical data and infer characteristics of populations from sample data.
none;none;psychology students

STATISTICAL HYPOTHESIS TESTING (elstatx;1974;unpublished)
Cohen, Jerry L; Shaw, Marilyn
Psychology Department, University of Illinois
This lesson treats hypothesis testing, assuming that one hyposthesis is true and stating an alternative hypothesis for test purposes.
none;none;psychology students

TRANSFORMATION, Z-SCORES AND THE NORMAL CURVE (elstat9;1974;1978)

Cohen, Jerry L

Psychology Dept., U of I, Urbana, Ill.

This lesson presents information about transformations and furnishes the formula for finding z-scores. Then the user is introduced to the normal curve and creates examples of his own.

none;open-ended;college/university students

WELCOME TO DESCRIPTIVE STATISTICS (pstat;1974;1976)

Cohen, Jerry L

Psychology Department, University of Illinois

The purpose of Descriptive Statistics is to summarize and condense a data distribution for a better understanding of the meaning of the data set.

none;2 hours;psychology students

Zoology

A SELF-CONTAINED LAB. WITH A "SIMPLE" BEHAVIOR (kinesis;1972;unpublished)

Hyatt, Gary

Dept. of Biological Sciences, U of I, Chicago Circle

This lesson uses a stochastic "choice" algorithm and animation to demonstrate orientation behavior in a "bug" exposed to variable stimuli. Students determine the quality (+ or -) and strength of the stimulus, and record "end points" of bug travel. A statistical (chi-square) evaluation of the hypothesis of random distribution is then made.

optional manual;45 minutes;university/college biology students

Statistics service programs

FLANDER'S DATA ANALYSIS (secedi;1974;unpublished)

Gaede, Owen F

College of Education, Univ. of Ill., Urbana IL

With this lesson the user can analyse data collected in the classroom using Flander's Interaction Analysis.

none;open-ended;teachers in secondary education/student teachers

AN INTRODUCTION TO "T" TEST (mustat;1976;1976)

Sanders, William H

School of Music, University of Illinois

The "t" Test is used to determine the significance of the difference between the means of two sets of scores. If you have given the same test to two of your classes and you wish to statistically compare the two sets of grades, the "t" Test is helpful.

pencil and paper; pocket calculator helpful;none;music research classes

LEAST SQUARES ANALYSIS (lstsq;1978,79;unpublished)

Oberle, Timothy T

Dept. of Chemical Engineering, University of Illinois

This is a lesson designed to fit data to linear and non-linear functions. There are six options available and the user can either enter data directly into this lesson or plot data stored in another lesson. Detailed explanation and instructions are provided.

none;open-ended;scientists and engineers

STAT PACKAGE (stat;1980;1977)

Avner, Richard A

Comp.-based Educ. Res. Lab., University of Illinois

This utility statistics package is data-oriented rather than procedure-oriented in that data is usually entered in an option especially designed for it rather than in a general data-editor. This means that it is possible to provide appropriate analyses automatically even if the user is unfamiliar with a particular statistical technique.

none;open ended;general audience

STAT PACKAGE: CHI-SQUARE AND CLASSIFICATION TESTS (stat5;1977,80;1977)

Avner, Richard A

Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains options I and J of the package. Option I provides 2×2 classification tables and option J has the larger classification tables, going up to 10×10 categories.

none;open-ended;general audience

STAT PACKAGE: CORRELATED DATA.OPERATIONS (stat9;1977,80;1977)

Avner, Richard A

Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains option F of the package. Option F provides for paired data, which consists of correlation, regression, curve-fitting, correlated *t*-tests, and *t*-tests with covariance adjustment.

none;open-ended;general audience

STAT PACKAGE: DESCRIPTIVE STATISTICS (stat7;1977,80;1977)

Avner, Richard A

Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains option D of the package, descriptive statistics. Given a list of data of any length, it computes the mean, range, variance and s.d., and Σ_x and $\Sigma_x 2$. For up to 100 items it also provides median, average deviation, histogram, rank ordering, and transformations of the raw data. Data may also be transformed automatically upon entry.

none;open-ended;general audience

STAT PACKAGE: FACTORIAL ANALYSIS OF VARIANCE (stat3;1977,80;1977)

Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains option K of the package, which is analysis of variance. This provides 1- to 3-way factorial analysis of variance with up to 32 cells and fixed or random factors. It gives an ANOVA summary table with MS, F, df, and probability for each effect and mean, s.d., and n for any combination of treatment and level.

none;open-ended;general audience

STAT PACKAGE: MULTIPLE COMPARISONS, PARTIAL CORRELATION (stat6;1977,80;1977)

Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains options G and L of the package. Option G provides multiple comparisons of sets of from 1-14 groups from a total of up to 18 groups. Option L contains partial correlation. From first-order correlations between 3 variables, it computes correlation between 2, with the effects of the third variable statistically removed.

none;open-ended;general audience

STAT PACKAGE: MULTIPLE CORRELATION (stat4;1977,80;1977)

Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains option M of the package, multiple correlation, which gives missing-data correlations for up to 6 variables at a time with no limit on sample sizes.

none;open-ended;general audience

STAT PACKAGE: NONLINEAR REGRESSION, CONFIDENCE INTERVALS (stat8;1977,80;1977)

Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson contains options H and O of the package. Option H has a nonlinear regression feature, showing the graphic relationship between predictor and criterion for up to 85 groups. Option O contains confidence intervals for commonly used statistics.

none;open-ended;general audience

STAT PACKAGE: PRESTORED DATA OPERATIONS (stat10;1977,80;unpublished)

Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois

This lesson provides the prestored data option (TERM/data), permitting pre-storing of up to 32 sets (with up to 960 values each) in datasets for subsequent processing. Analysis options include descriptive statistics, t-tests for independent groups, paired data, multiple comparisons, nonlinear regression, analysis of variance and multiple correlation.

none;open-ended;general audience

STAT PACKAGE: PROBABILITY DISTRIBUTIONS (stat2;1977,80;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson contains option N, probability distributions. It gives the probability point to 6 decimal places for values from normal, t, chi-square, F, binomial, poisson, negative exponential, and r distributions. This option also gives values corresponding to probability points in the range of .001 to .999 for normal, t, F, and chi-square distributions.
none;open-ended;general audience

STAT PACKAGE: RAW DATA OPERATIONS, INDEPENDENT T TESTS (stat1;1977,80;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson contains options C and E of the package. Option C provides for desk calculator manipulations of raw data and item scores. Option E contains t tests (independent samples), giving t, probability value, confidence intervals for difference in means, and estimated size of experimental effect.
none;open-ended;general audience

STAT PACKAGE: TOLERANCE LIMITS AND POWER ANALYSIS (stat;1977,80;1977)
Avner, Richard A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides options A, B, P and Q of the package. Option A contains general information and instructions on entering data. Option B contains option descriptions and helps direct a new user to an appropriate option. P offers tolerance limits and option Q, statistical power analysis.
none;open-ended;general audience

Statute of frauds

THE STATUTE OF FRAUDS (pfrauds;1978;unpublished)
Maggs, Peter B; Platt, Robert C
College of Law, University of Illinois, Urbana, Ill.
The lesson is a review of the Statute of Frauds designed for students who have already some familiarity with the statute. The student is asked questions based on various situations which might arise in contracts to which the Statute of Frauds applies.
none;open-ended;first year students of law

Stereochemistry

CARBOHYDRATES, PART I: INTRODUCTION TO MONOSACCHARIDES (sugar1;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois
The lesson presents the definition and classification of single unit carbohydrates called monosaccharides. It is the first in a series of lessons on carbohydrates.
none;1 to 1.5 hours;college and university students of organic chemistry

HUMAN HEMOGLOBIN INTERACTION WITH POLYPHOSPHATES (hemodpg;1977;unpublished)
McDiarmid, Melissa A; Bucci, Enrico; Ryker, Martha
School of Medicine, Univ. of Maryland, Baltimore
This lesson deals with the stereochemistry of the binding of 2,3DPG (2,3-diphosphoglycerate) to human hemoglobin and with the simulations of oxygen transport in the presence of varying oxygen pressures at the lungs and varying amounts of 2,3DPG inside the red cells.
none;none;first year medical students

Sternum

HUMAN SKELETAL SYSTEM: PART I - THE THORAX (skelsys2;1977;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This osteology lesson presents the bones of the thorax. Surfaces, borders and markings of the sternum, costal cartilages, and typical and atypical ribs are illustrated and described. Boundaries of the thoracic inlet and outlet are defined. Directions for palpating subcutaneous parts of these bones are included. There is a post-test.
none;20 minutes;first year medical students

Steroid drugs

DRUGS: ADRENAL STEROIDS (kumc43;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson first reviews some diseases of hyper- and hypothyroidism, then discusses the therapeutic use of steroid drugs in their treatment.
none;10 minutes;first year medical students

Stimulants

CNS PHARMACOLOGY: STIMULANTS AND HALLUCINOGENS (kumc22;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson presents material on hallucinogenic agents and central nervous system stimulants.
none;10 minutes;first year medical students

Stock-exchange--Accounting

ENTRIES FOR CORPORATIONS (tkl;1978;unpublished)
McKeown, James C
Department of Accountancy, U of I, Urbana, Ill.
This lesson teaches the student how to make proper entries for stock issuance under various conditions, i.e., the sale of stock for cash and other assets, the sale of common and preferred shares, the sale of shares at par value or premium.
none;60 minutes;introductory accounting students

Stomach

ANATOMY OF THE STOMACH (stomach;1976;unpublished)
Capek, Michael
Southern Illinois University and University of Illinois
The lesson presents quizzes and drills on the gross and microscopic anatomy of the human stomach.
none;45 minutes;health science students and students of biology

Stomach--Diseases

PROBLEM SOLVING IN CLINICAL MEDICINE: STOMACH TROUBLE (feinz5;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is a 25-year-old woman with occasional nausea and vomitting. The user is a student physician working for an ambulatory care facility who has been assigned to this woman. Choices are made from options provided and each selction is discussed.
none;none;medical students

Strategy

see Recreational games

TRIAD AND STRATEGIC DETERRENCE (triad;1979;unpublished)
Everett, Kenneth N; Prebeck, Steven R
Air Force Reserve Officers Training Corps / U of I
This lesson provides a general overview of the concept of strategic deterrence and the role that the triad of military nuclear forces serves in that concept.
microfiche, optional touch panel;35 minutes;cadets and general public

Streptococcal infections

PENICILLIN-RESISTANT STREPTOCOCCUS PNEUMONIAE (penres;1977;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents a case from "Morbidity and Mortality Weekly Reports" centered around the isolation of a penicillin-resistant strain of S. pneumoniae from a patient with apparent immunological dysfunction. Questions dealing with related material are interspersed throughout the lesson.
none;10 minutes;medical students

Streptococcus

MICROLOGUE II: GRAM POSITIVE COCCI, PART II (microlog2b;1975;unpublished)
Gabridge, Michael G; Pechman, K J; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
This lesson continues the discussion of the gram positive cocci begun in Part I. The patient dialogue is continued with specific consideration of staphylococcus, streptococcus and streptococcus pneumoniae. Characteristics and morphology of these organisms are studied as well as criteria for identification.
microfiche;20 minutes;first year medical students

PENICILLIN-RESISTANT STREPTOCOCCUS PNEUMONIAE (penres;1977;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents a case from "Morbidity and Mortality Weekly Reports" centered around the isolation of a penicillin-resistant strain of S. pneumoniae from a patient with apparent immunological dysfunction. Questions dealing with related material are interspersed throughout the lesson.
none;10 minutes;medical students

Stress (Physiology)
IT'S A JUNGLE OUT THERE (stress;1978;unpublished)
Sabbour, M. Saddeck; Nelson, Charles D; Kemp, Larry
U of I Medical School, Cntr. for Ed. Development
In this simulation, Lushwell Smirnoff, 41-year-old business executive, passes out after "passing some motions" during a heated board meeting at work. He is brought to the emergency room where it is a slow night, and the user has the opportunity to do a history, physical, lab workup and emergency treatment. Procedures are summarized at the end.
none;25 minutes;medical students

Stroke
see Cerebrovascular disease

Substitution reactions
ELECTROPHILIC AROMATIC SUBSTITUTION (arene;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson deals with the introduction of substituents on a benzene ring. The mechanism of electrophilic substitution and its directive effects are presented.
none;58 minutes;college/university students

MULTISTEP AROMATIC SYNTHESIS (opta;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This lesson gives the student the opportunity to designate the steps in an electrophilic aromatic substitution reaction experiment. The student indicates the sequence of reactions to prepare benzene derivatives by supplying the reagent and the computer draws the structure of the product.
none;39 minutes;college/university students

SUBSTITUTION AND ELIMINATION (sn2t;1973;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The student explores the effects of the structure of alkyl halide and the effect of alkoxide concentration on the rates of these reactions and on the ratio of substitution to elimination.
none;43 minutes;college/university students

SUBSTITUTION AND ELIMINATION REACTIONS - PRACTICE PROBLEMS (subprob;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson allows the student to practice substitution and elimination reactions. The lesson can only be used with a touch panel. The student is asked to indicate, by touching the appropriate spot on the screen, the starting materials, reagents and products for the reactions.
touch panel;33 minutes;college/university students

Subtraction

ADDING AND SUBTRACTING ON THE NUMBER LINE (signum;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson introduces the number line, the negative numbers, and teaches order on the number line. It also teaches a number line model of adding and subtracting signed numbers and includes practice problems.
none;45 minutes;basic mathematics students

ADDING AND SUBTRACTING SIGNED NUMBERS (post;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana IL
This lesson is a model for the operation of addition and subtraction of signed numbers to enable the students to work with statements like +3 - -2 = +5.
none;10 minutes;elementary mathematics students

BEEHIVE (bees;1975;1978)
Dugdale, Sharon; Kibbey, David; Leung, Helen
U of I NSF Elem. Math. Group, CERL
The purpose of the lesson is to give the student experience with beginning subtraction. The student is given feedback at the end of the lesson to show how well he has done.
none;5-15 minutes;primary grade students

CHAPTER CHECKUPS (zmodcheck;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson offers checkup problems for multiplication meanings, techniques and subtraction ("countdown" and "facts" methods), and the multiplication algorithm as well as division concepts.
none;open-ended;intermediate level elementary students

COUNTDOWN (zcountdown;1976;unpublished)
Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson introduces the idea of subtracting by counting backwards by tens and units and provides practice using that technique.
none;10 minute session repeated until mastered;elementary students

EXERCISES -- ADDING AND SUBTRACTING (signprac;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides drill practice in adding and subtracting signed numbers and a posttest for these skills.
none;30 minutes;basic mathematics students

MENTAL ARITHMETIC (wmg01; 1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
The program presents mental arithmetic problems involving addition, subtraction and multiplication. The problems are grouped according to difficulty. The student races against time. The solution time may be varied by the teacher and the computer then speeds up the allocated time as the participant becomes more proficient.
none;open-ended;elementary school children

MENTAL COUNTDOWN (zcountdow2;1976;unpublished)
Seiler, Bonnie Anderson
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson provides explicit instruction and practice in mental subtraction by counting backwards. It is a sequel to lesson "zcountdown".
none; 3 sessions, repeatable;elementary students

MIXED DRILL + - × ÷ (wmg08;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
This lesson provides practice with addition, subtraction, multiplication and division.
none;none;elementary school children

NUMBER ACCUMULATOR (accum;1978;unpublished)
Graph. Strand Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Ill.
This is a lesson which allows the student to practice adding and subtracting numbers to equal the number given by PLATO.
touch panel;open-ended;elementary mathematics students

PROBLEM MACHINE (zpmachine;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson helps the student understand the addition and subtraction algorithms by showing him incorrect problems and having him adjust one of the numbers in the problem to make it correct.
none;open-ended;intermediate level elementary students

SPACE PORT (port;1975;1978)
Dugdale, Sharon
U of I NSF Elem. Math. Group, CERL
The lesson provides experience with easy function rules.
none;open-ended;primary grade students

SUBTRACTING IN YOUR HEAD (zsubways;1976;unpublished)
Whole Number Elem. Math. Group
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson gives the student the opportunity to compare and practice the "countdown" and "facts" methods of mental arithmetic.
none;one 10 minute session, repeatable;elementary students

SUBTRACTING SIGNED NUMBERS (signsub;1976;1978)
Weaver, Tamar A
Comp.-based Educ. Res. Lab., University of Illinois
This lesson teaches a number line model of subtracting signed numbers and offers practice.
none;25 minutes;basic mathematics students

SUBTRACTION CHECKUP; VERT. SUBTRACTION; SUBTRACTION POSTTEST (zsticksv;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Steinberg, Esther R; et al.
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson presents a checkup on the student to see if he can use the subtraction algorithm correctly following the instructional lessons. A student who does not meet criteria will receive more practice and then be tested again. A student who passes the posttest has completed the subtraction sequence.
none;one 10 minute segment, repeatable;elem. students

SUBTRACTION WITH BORROWING (wmg07;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
The lesson presents a series of subtraction problems.
none;none;elementary school children

SUBTRACTION WITH STICKS (zsticks;1976;unpublished)
Weaver, Charles S; Seiler, Bonnie Anderson; Steinberg, Esther R; et al.
U of I NSF Elem. Math. Group, Urbana, Illinois
The lesson is in two parts. The first part establishes a model for subtraction using bundles of ten sticks and single sticks. "Borrowing" is done by opening a bundle into ten loose sticks. The second part relates the stick model to the standard subtraction algorithm so that the student can work vertical 2-digit subtraction problems.
none;two or three 10 minute segments per part;elementary students

Sugars

CARBOHYDRATES (nutr3;1976;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
The third lesson in the Nutrition Series presents material on the different carbohydrates, their utilization for energy, and food sources.
none;25-30 minutes;nutrition students

CARBOHYDRATES III: CARBOHYDRATE IDENTIFICATION AND STRUCTURE (mcarbo;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson provides drill and practice in the identification of common carbohydrates and carbohydrate derivatives.
none;25 minutes;first year medical students

CARBOHYDRATES IV: IDENTIFICATION OF CARBOHYDRATES (mcarbqz;1975;unpublished)
Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois
This lesson is a competitive exercise in which students are asked to identify structures of carbohydrates and their derivatives, picked randomly. Speed and accuracy are emphasized and students compete for the lowest score (i.e., the lowest time with the fewest mistakes).
none;10 minutes;first year medical students

CARBOHYDRATES, PART IIA: STRUCTURE OF MONOSACCHARIDES (CONT) (sugar2a;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois
The lesson is a review of the structure representation of single unit carbohydrates. It is the third in a series of lessons on carbohydrates and is a continuation of "Carbohydrates, Part II".
none;30 minutes;college and university students of organic chemistry

CARBOHYDRATES, PART III: REACTIONS OF MONOSACCHARIDES (sugar3;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois
The lesson is the fourth in the series on carbohydrates. This part treats the reactions of monosaccharides.
none;1 hour;college and university students of organic chemistry

CARBOHYDRATES, PART II: STRUCTURES OF MONOSACCHARIDES (sugar2;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois
The lesson discusses some of the various means of structure representation of single unit carbohydrates. This is the second in a series of lessons on carbohydrates.
none;1 hour;college or university students of organic chemistry

CARBOHYDRATES, PART I: INTRODUCTION TO MONOSACCHARIDES (sugar1;1974;1978)
Myers, Harvey N
Chemistry Department, University of Illinois

The lesson presents the definition and classification of single unit carbohydrates called monosaccharides. It is the first in a series of lessons on carbohydrates.

none;1 to 1.5 hours;college and university students of organic chemistry

Sulphur in the body

MACROMINERALS (macmin;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I

This lesson presents information about macrominerals, or those minerals required in the human diet in amounts exceeding 100 mg. per day. The macrominerals are calcium, phosphorus, magnesium, potassium, sodium, sulphur and chlorine.

none;25-30 minutes;nutrition students

Supply and demand

MICRO ECONOMICS I: SUPPLY AND DEMAND (consume3;1976;1977)
Paden, Donald W; Barr, Michael; Wilson, James H
Department of Economics, University of Illinois

The lesson reviews the concepts of demand and supply and (demand) elasticity by a series of questions on the concepts which are graphically illustrated in a simple manner. The student's answers are scored giving him a means of assessing the extent of his knowledge and understanding of the concepts of demand, supply and elasticity.

none;35 minutes;college/university

Surveys

OPINION SURVEY AND ANALYSIS PACKAGE (opinion;1976;1977)
Siegel, Martin A
Comp.-based Educ. Res. Lab., University of Illinois

Detailed instructions are given the user of the PLATO Opinion Survey as to how to administer an opinion survey and analyze the results.

none;open-ended;PLATO teachers

Suspension (Chemistry)

SOLUTIONS -- CONCENTRATION (conc;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois

The lesson deals with the use of units of concentration (dimensional analysis) in quantitative chemical work where most chemical reactions take place in solutions. Problems of increasing difficulty are presented particularly the kinds of problem common in chemistry laboratories.

none;46 minutes;college/university students

Sympatholytic agents

AUTON. PHARMACOL.: ADRENERGIC MECHANISMS AND USES (kumcl3;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson treats the effects of adrenergic stimulating and blocking agents. The concept of alpha and beta adrenergic receptors is included.
none;10 minutes;first year medical students

Sympathomimetric agents

AUTON. PHARMACOL.: ADRENERGIC MECHANISMS AND USES (kumcl3;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson treats the effects of adrenergic stimulating and blocking agents. The concept of alpha and beta adrenergic receptors is included.
none;10 minutes;first year medical students

Synthesis (Chemistry, Organic)

AROMATIC SYNTHESIS GAME (areneg;1975;1977)
Smith, Stanley
Chemistry Department, University of Illinois
This is an interterminal game for two persons. One player makes up a compound for another player to synthesize. If the player fails to make the compound, the namer of the compound has to synthesize it himself. The first person to prepare five compounds wins the game.
none;open-ended;college/university students of organic chemistry

THE GREAT SYNTHESIS RACE (syng;1973;1977)
Smith S - Chabay R
Chemistry Department, University of Illinois
This is a multistep synthesis game in which two players race to perform a multistep aliphatic synthesis from randomly chosen materials. There are a mono ("syng") and a two-terminal ("syng2") version of the game. The synthesis involves the use of Grignard reactions and simple alcohol-carbonyl group interconversions.
none;66 minutes;college/university students

MULTISTEP ALIPHATIC SYNTHESIS (isyn;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson deals with the interconversion of simple organic compounds. Some approaches to multistep synthesis are outlined using Grignard reactions.Students must prepare several compounds by indicating reagents for each step with the computer drawing the structure of the product.
none;53 minutes;college/university students

Syphilis

THE MICROBIAL BASIS OF VENEREAL DISEASE (veedx;1976;unpublished)
Ehrhardt, Melvin E
School of Basic Medical Sciences, Univ. of Illinois

This lesson provides an introduction to the identification of venereal diseases, including definitions of syphilis, gonorrhea, lymphogranuloma venereum, chancroid and Donovaniasis. Symptoms, signs, manifestations, and diagnostic tests are covered along with preventative treatment for syphilis.

optional microfiche;none;medical students

Taxonomy (Botany)

see Botany--Classification

Teachers, Rating of

TENURE: A SIMULATION OF A FIRST YEAR OF TEACHING (tenure;1975;unpublished)
Gaede, Owen F
College of Education, U. of Illinois, Urbana IL

This is a simulation of a first year of teaching. The user must make decisions similar to those of a first year teacher in order to attain tenure and a salary increase.

none;30 minutes to 2 hours;secondary education teacher training

Teaching

CORRECTIVE FEEDBACK PARADIGM (cfp;1975;unpublished)
Siegel, Martin A; Misselt, A Lynn; Tatsuoka, Kay
PLATO Education Group, CERL, Univ. of Illinois

This is a program giving a corrective feedback and criterion teaching model for PLATO drills. It is a model which is very different from standard drill routines. It features: 1) review positions for items "missed", 2) specification of criterion for number of times correct answers must be given, 3) discrimination training and feedback on items confusing user.

none;open-ended;teachers interested in designing drill routines using PLATO

CORRECTIVE FEEDBACK PARADIGM: AN EXAMPLE (feedback;1975;unpublished)
Siegel, Martin A; Misselt, A Lynn; Tatsuoka, Kay
PLATO Education Group, CERL, Univ. of Illinois

The lesson is an example of the Corrective Feedback Paradigm, a corrective feedback and criterion teaching model for PLATO drills. There is no inspect code on the lesson so it may be examined for information on how the defines, -use-s and other options are set up. The complete description of the drill paradigm may be found in lesson "cfp".

none;none;teachers interested in designing drill routines using PLATO

TENURE: A SIMULATION OF A FIRST YEAR OF TEACHING (tenure;1975;unpublished)
Gaede, Owen F
College of Education, U. of Illinois, Urbana IL
This is a simulation of a first year of teaching. The user must make decisions similar to those of a first year teacher in order to attain tenure and a salary increase.
none;30 minutes to 2 hours;secondary education teacher training

Teaching--Aids and devices

ECONOMICS SUPPLEMENTARY PACKAGE (espackage;1977;unpublished)
Paden, Donald W; Barr, Michael
Economics Department, University of Illinois
The Economics Supplementary Package (ESP) is a package of lessons designed to assist in the instruction of introductory economics. This lesson familiarizes the instructor with the ESP system - how it works and how to use it with students.
none;open-ended;instructors of introductory economics

FINGER PAINTING (touchpaint;1976;1978)
Gilfillan, James W
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson allows the user to create pictures by touching the screen. The pictures can be stored and viewed by the user as well as others.
touch panel;open-ended;kindergarten - elementary grades

MULTIPLE CHOICE QUIZ CONSTRUCTION (muchoq;1976;1978)
Kraatz, James M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson allows an instructor to make up a multiple choice quiz without the need to know TUTOR authoring.
none;open-ended;instructors

Teeth

TOOTH STRUCTURE (shp81;1975;unpublished)
Fincher, Brad
Sheppard Air Force Base, Texas
This four-part lesson discusses tooth layers, pulp of the tooth, tooth landmarks and supportive structures, with a drill at the end. A pronunciation key is provided.
none;2 hours;dental assistants

Telegraph

ROSE (rose;1976;1978)
Sleator, Daniel; Sleator, Tycho
University of Illinois
The first three sections of this lesson generate rose patterns. The final four sections are games: Conway's Game of Life; X,Y Equation Solver Game; Morse Battle Game; Brain-o-Battle.
none;open-ended;none

WELCOME TO MORSE II (morse;1979;unpublished)
Williams, Steven R; Hightower, Michael L
Comp.-based Educ. Res. Lab., University of Illinois
This program is designed so that by practice of Morse code receiving, the operator can increase his skills (particularly speed) of Morse reception. There are several drills with random letters (punctuation and numbers included) and words. Also available are the games "Wordwar" and "Codewar" where the operator attempts to break time/speed records of others.
Gooch Synthesizer, etc.;open-ended;Morse Code enthusiasts

Terminal care

DEATH AND DYING: PSYCH. MANAGEMENT OF THE TERMINAL PATIENT (death;1976;unpublished)
Ruggieri, Pamela J; Nelson, Charles D
U of I Medical School, Cntr. for Ed. Development
This lesson provides a short introduction to the work of Kubler-Ross, followed by a didactic simulation of counseling a terminal patient, Mr. Kraft. Mr. Kraft makes statements and the student must pick from the replies provided. Analysis questions are asked about each of the choices. The case is summarized at the end.
none;none;medical students, any health professional

Territoriality (Zoology)

SOCIAL BEHAVIOR SIMULATED FIELD OBSERVATIONS (birds;1974;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses animation and a stochastic model of bird aggression to allow students to investigate the "personal space" phenomenon typical of many animal groups.
none;60 minutes;college/university zoology students

Tetralogy of Fallot

CONGENITAL DEFECTS OF THE HEART AND GREAT VESSELS (pedcard;1977;unpublished)
Green, Michael; Sliwa, W. Gerard
School of Basic Medical Science, Univ. of Illinois
This lesson presents basic physiology and key clinical signs of major congenital defects of the heart and great vessels.
none;none;first year medical students

Therapeutics

ANTIMICROBIAL CHEMOTHERAPY (shp66;1975;unpublished)
Gage, William V
Sheppard Air Force Base, Texas
This lesson discusses the general concepts of antimicrobial chemotherapy and the currently available compounds that can be effective in the treatment of infectious diseases.
none;45-60 minutes;physicians' assistants

Thermodynamics

BASIC THERMODYNAMICS QUIZ (mthermo2;1976;unpublished)
Ahasic, Thomas; Agee, C. Coe
School of Basic Medical Sciences, Univ. of Illinois

This lesson contains diagnostic and problem solving sections on thermodynamics. Three diagnostic drills cover the basic concepts of free energy, entropy and electromotive potential. The problem solving section combines practical applications with sufficient help to lead the student to the correct answers.

none;45 minutes;first year medical students

ENTHALPY EFFECTS (che4;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on enthalpy and heats of reactions designed for sophomore stoichiometry students in chemical engineering. There are six different problems with randomized variables. Help is available at almost any point in the lesson.

none;none;sophomore chemical engineering students

FIRST LAW OF THERMODYNAMICS, CLOSED SYSTEMS - PART I (che9;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on the first law of thermodynamics over closed systems, designed for sophomore stoichiometry students in chemical engineering. There are six problems with randomized variables.

none;31 minutes;sophomore chemical engineering students

FIRST LAW OF THERMODYNAMICS, CLOSED SYSTEMS - PART II (che12;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on the first law of thermodynamics designed for sophomore stoichiometry students in chemical engineering. This particular set of six problems involves closed systems which are somewhat more advanced than those in part one. Randomized variables are given.

none;95 minutes;sophomore students of chemical engineering

THERMODYNAMIC DIAGRAMS (BASIC) (che8;1977;unpublished)
Oberle, Timothy T; Eckert, Charles A
Dept. of Chemical Engineering, U of I, Urbana

This is a lesson on reading thermodynamics diagrams designed for sophomore students in chemical engineering. There are six different problems.

touch panel;35 minutes;sophomore students of chemical engineering

ΔH LAW OF HESS (enthalpy;1976;1977)
Ghesquiere, James R
Comp.-based Educ. Res. Lab., CERL, Univ. of Ill.
This lesson discusses endothermic and exothermic chemical reactions, and teaches the student how to add equations to determine the enthalpy of a reaction.
none;37 minutes;college/university students

Throat--Diseases

PROBLEM SOLVING IN CLINICAL MEDICINE: SORE THROAT (feinz1;1977;unpublished)
Feinzimer, Michael; Nelson, Charles D; Kemp, Larry
Rockford School of Medicine, University of Illinois
In this simulation the patient is an eight-year-old girl who has had a fever to 104°, sore throat and cough for three days. The user is a student physician working in an ambulatory care facility who has been assigned to this family. Choices are made from options provided and each selection is discussed.
none;none;medical students

Thyroid antagonists

DRUGS: ADRENAL STEROIDS (kumc43;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson first reviews some diseases of hyper- and hypothyroidism, then discusses the therapeutic use of steroid drugs in their treatment.
none;10 minutes;first year medical students

DRUGS: THYROID AGENTS (kumc49;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson describes and reviews hyper- and hypo- thyroid conditions, treats the function of the thyroid gland, and discusses some thyroid agents and their effect upon the gland.
none;10 minutes;first year medical students

Thyroid gland

DRUGS: ADRENAL STEROIDS (kumc43;1975;unpublished)
Kansas University Medical Center; Kimble, Peter; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson first reviews some diseases of hyper- and hypothyroidism, then discusses the therapeutic use of steroid drugs in their treatment.
none;10 minutes;first year medical students

DRUGS: THYROID AGENTS (kumc49;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson describes and reviews hyper- and hypo- thyroid conditions, treats the function of the thyroid gland, and discusses some thyroid agents and their effect upon the gland.

none;10 minutes;first year medical students

Tibia

HUMAN SKELETAL SYSTEM: PART III - THIGH AND LEG (skelsys3;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore

This osteology lesson presents the bones of the thigh and leg. Surfaces, borders and markings of the femur, patella, tibia and fibula are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.

none;30 minutes;first year medical students

Tissues

CUTTHROAT HISTOLOGY: COMPETITITIVE INTERTERM. DRILL (cuthis;1976;unpublished)
McCormick, R; Gaburo, K
Basic School of Medical Sciences, Univ. of Illinois

This lesson features the identification of tissues and organs from over 200 photomicrographs on microfiche. A series of questions, related to that photomicrograph, are presented for the student to answer as fast and as accurately as possible. The student may challenge another student or match wits with PLATO. The photomicrographs and questions may be reviewed.

microfiche;open-ended;first year medical students

HISTOLOGY - EPITHELIUM (etisl;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson teaches beginning students the fundamentals of epithelial characteristics, identification and classification. Junctional complexes and and cell surface specializations are included. Color photomicrographs of tissues and PLATO graphics, combined with extensive interactive feedback are featured. There is a pre-test and a post-test.

microfiche;none;first year medical students

INTRODUCTION TO PLATO HISTOLOGY (beghis;1976;unpublished)
McCormick, R; Gaburo, K
School of Basic Medical Sciences, Univ. of Illinois

This lesson is composed of two subunits. The first introduces the student to the subject of histology - defining "histology" and "tissue." An attempt is made to motivate the student toward studying the tissues. The second section describes the methods for using the "microfiche system" in the PLATO histology lessons.

microfiche;20 minutes;first year medical students

Topology

THREE DIMENSIONAL SPACE SURFACE PLOTTER (warp;1979;unpublished)
Lasker, Jeffrey M
University of Connecticut

This lesson projects any segmented function in simulated three-dimensional space. The three-dimensional image is simulated by describing the point of view of the observer with respect to the segmented function in space. Detailed help is included.

none;open-ended;general

Torque

TORQUE AND ANGULAR MOMENTUM (torque;1974;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois

The lesson presents the concepts of torque and angular momentum and includes drills on direction and magnitude of torques applied by a wrench (treatment is mainly two-dimensional). Angular momentum is calculated for a spinning and translating dumbbell. There is also an example of angular momentum conservation.

none;60 minutes;college/university students in introductory physics

Toxicology

CASE HISTORY: EMERG. ADMISSION FROM UNEXPECTED DRUG REACTION (kumc17;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / Univeristy of Illinois

This lesson provides a brief case history presenting a patient with central complications secondary to the ingestion of tranycypromine and d-amphetamine. Following patient stabilization, the case is reviewed and pertinent information is given.

none;10 minutes;first year medical students

CHOLINERGIC DRUGS: A CASE-ORIENTED QUIZ (ucsf1;1976;unpublished)
Burkhalter, Alan; Kornberg, Stephen; Hody, George
University of California / University of Illinois

The objective of this lesson is to give the student the ability to make a diagnosis of a certain type of disorder on the basis of the classic presenting signs and symptoms. Treatment is also discussed.

none;10 minutes;first year medical students

TOXICOLOGY: CASE STUDY I (kumc61;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois

This lesson presents and discusses two emergency cases of persons suffering severe symptoms after ingesting a toxic dose of medication. The student "assists" in testing for the identification of medication and treating the patient.

none;15 minutes;first year medical students

TOXICOLOGY: CASE STUDY II (kumc63;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
In this lesson the student must diagnose and treat an emergency case patient. The symptoms are provided but there is little help given and for the most part, the student is on his/her own.
none;15 minutes;first year medical students

TOXICOLOGY: GENERAL REVIEW (kumc56;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson provides the student with review questions dealing with the treatment of drug overdose.
none;20 minutes;first year medical students

TOXICOLOGY: QUIZ (kumc60;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson contains a quiz over toxicology materials found in the PLATO toxicology lessons.
none;15 minutes;first year medical students

Toxins and antitoxins

MICROBIAL TOXINS II: BACTERIAL TOXINS (microtox2;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
The lesson is the second in the series on pathogenicity through toxin production. This lesson reviews information on bacterial toxins concerning general properties, toxicity, and immunology.
slide selector, microfiche;20 minutes;first year medical students

Transformations (Mathematics)

MATRICES AND LINEAR TRANSFORMATIONS (ytrans; 1976;1978)
Tatsuoka, Kikumi; Baillie, Robert
Computer-based Educ. Res. Lab., University of Illinois
This lesson is the fourth in a series of lessons on matrix algebra as applied to multivariate statistics. The lesson deals with matrices and linear tranformations.
none;60 minutes;college/university undergraduate and graduate students

TRANSFORMATION OF COORDINATES (atrans;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
The final lesson in the series on Elementary Crystallography is one which teaches the analysis of the change in the coordinates of points and the Miller indices of planes brought about by a specified change of axes.
none;none;college and university undergraduate and graduate students

TRANSFORMATION, Z-SCORES AND THE NORMAL CURVE (elstat9;1974;1978)
Cohen, Jerry L
Psychology Dept., U of I, Urbana, Ill.
This lesson presents information about transformations and furnishes the formula for finding z-scores. Then the user is introduced to the normal curve and creates examples of his own.
none;open-ended;college/university students

Transients (Electricity)

RL AND RC TRANSIENTS (rlrc;1975;unpublished)
Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This exercise provides the student with practice using single time-constant RL and RC networks with step sources. Help is available as well as descriptions of the various parameters.
none;none;undergraduate electrical engineering students

RLC: PARALLEL RLC CIRCUIT ANALYSIS (tnlab;1975;unpublished)
Weston, Paul
Dept. of Electrical Engineering, Univ. of Illinois
This lesson simulates transient analysis of RLC networks. The student chooses the variables for the system to be analyzed. Detailed instructions are provided.
none;none;undergraduate electrical engineering students

Transposition (Music)

TRANSPOSITION (transpose2;1977;unpublished)
Bartlett, Judith A
School of Music, University of Illinois
This is a program to write music and transpose it. Four staffs may be used at one time and choices of clef, notes and key are provided.
none;open-ended;students of music and composition

Trees--Identification

PLANT TAXONOMY (taxon1;1975;unpublished)
Haney, Alan W
Botany Dept., U of I, Urbana, Ill.
This lesson teaches the student to use a taxonomic key and to recognize plant characteristics commonly used in vegetative keys.
microfiche;45 minutes;college/university students

TREE IDENTIFICATION QUIZ (taxon2;1975;unpublished)
Haney, Alan W
Botany Dept., U of I, Urbana, Ill.
This is a quiz to aid the student in successfully "keying-out" five trees. It should be used after completion of the lesson "Plant Taxonomy."
microfiche;15 minutes;college/university students

Trigonometry

ANGLE MEASURE: PROPERTIES OF SOME SPECIAL TRIANGLES (trig2;1976;1978)
Baillie, Robert; Thompson, Paul
Community College Math. Group, CERL, Univ. of Ill.
The purpose of this lesson is to familiarize the student with facts about right triangles. Instruction about typing the degree symbol (°), and a proof for "The sum of the angles of a triangle equals 180 " are provided. Properties of the 90 -45 -45 and the 90 -60 -30 right triangles are developed to use with the Pythagorean Theorem in problems.
none;30 minutes;high school level and above

INTRODUCTION TO COSINE AND TANGENT (trig4;1976;1978)
Baillie, Robert; Thompson, Paul
Community College Math. Group, CERL, Univ. of Ill.
This lesson provides instruction and practice on using the cosine and tangent to find missing sides or angles of right triangles.
none;30 minutes;high school level and above

INTRODUCTION TO THE SINE FUNCTION (trig3;1976;1978)
Baillie, Robert; Thompson, Paul
Community College Math. Group, CERL, Univ. of Ill.
This lesson illustrates and explains the sine function. It provides instruction in using the sine for finding missing sides or angles of a right triangle.
none;30 minutes;high school and above

MATH. FOR COMMUNITY COLLEGES AND ADULT EDUCATION (mathcc;1976;unpublished)
Community College Math. Group
Computer-based Edcuation Research Lab., Univ. of Ill.
The program is the index program for a series of lessons written for Community Colleges and Adult Education under a grant from the National Science Foundation. Lessons are available in Arithmetic, Algebra and Graphing, Geometry, Measurement and Trigonometry, and Probability.
none;variable;community college and adult education students

RADIAN MEASURE (inertia;1974;unpublished)
Bennett, Carol D; Smith, James H
Physics Department, University of Illinois, Urbana
This elementary classical mechanics lesson discusses radians and degrees, with the intent that the user master the concepts of radian angle measure and $\sin(\theta) \to \theta$ as $\theta \to 0$.
none;none;physics students

SIMILAR TRIANGLES: INTRODUCTION TO TRIGONOMETRY (trig1;1976;1978)
Baillie, Robert; Thompson, Paul
Community College Math. Group, CERL, Univ. of Ill.
This is the first lesson in a series on trigonometry, trig1-trig6. The first lesson is an introduction to trigonometry and a review of the geometric concepts prerequisite to trigonometry.
none;40 minutes;high school and above

SOLVING OBLIQUE TRIANGLES (trig6;1976;1978)
Baillie, Robert
Community College Math. Group, CERL, Univ. of Ill.
The lesson introduces the laws of sines and cosines and provides examples and practice in solving oblique triangles.
none;30 minutes;high school and above

SOLVING RIGHT TRIANGLES (trig5;1976;1978)
Baillie, Robert
Community College Math Group, CERL, Univ. of Ill.
The lesson provides a review for the sine, cosine and tangent of an angle and applications to solving right triangles.
none;30 minutes;high school and above

Tuberculosis

GRANULOMATOUS INFECTIONS OF THE RESPIRATORY SYST. (granuloma;1977;unpublished)
Leveridge, C. Tony; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathologic entities of pulmonary tuberculosis and sarcoidosis, as well as dealing with mycotic infections and coin lesions in the context of granulomatous conditions. The material is highly indexed, facilitating access to specific areas.
optional touch panel;none;first year medical students

Tuberculosis--Transmission

TUBERCULOSIS ON AN EGG FARM IN MAINE (tbc;1977;unpublished)
Levy, Allan H
School of Basic Medical Sciences, Univ. of Illinois
This lesson, based on material in "Morbidity and Mortality Weekly" published by the Center for Disease Control, Atlanta, Georgia, presents a case of a positive TB skin test on a man refusing to be further examined. The student is asked pertinent questions throughout the lesson.
none;5-10 minutes;medical students

Tumors

CHEMOTHERAPEUTICS: MALIGNANT NEOPLASMS (kumc34;1975;unpublished)
Kansas University Medical Center; Crow, J. W.; Kimble, Peter; et al.
University of Kansas / University of Illinois
This lesson discusses chemotherapeutic treatment of cancer. The relationship of tumor cell toxicity to host cell toxicity known as chemotherapeutic index is explained.
none;20 minutes;first year medical students

ORAL CONTRACEPTIVES AND NEOPLASIA (ocneo;1979;unpublished)
Schooley, Ralph E
School of Basic Medical Sciences, Univ. of Illinois
This lesson reviews the types of epidemiological studies used to investigate the possible relationships between oral contraceptive use and neoplasia. The risk factors for contracting breast, cervical, endometrial, and liver cancer are reviewed, and the results of studies relating oral contraceptive use to the aforementioned cancers are presented.
none;30 minutes;first year medical students/health science students

TUMORS OF THE RESPIRATORY SYSTEM (ltumor;1977;unpublished)
Smith, Terrald J; McCraw, Gordon W; Coalson, J. J.
Oklahoma University Health Sciences Center
This lesson covers the pathological and clinical aspects of tumors of the respiratory system. Diagnostic criteria and possible hormonal syndromes are also considered. A highly indexed outline format is utilized with questions presented to help assess the student's understanding of the material.
optional touch panel;none;first year medical students

TUTOR (The PLATO language)

BUFFER DISPLAY - DEBUGGING OPTION (showit;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., University of Illinois
The program is a debugging utility which lets the programmer quickly display everything in a buffer so as to locate data.
none;open-ended;PLATO authors

EXECUTION ERROR LOCATOR (execfind;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., Univ. of Illinois
The program is a utility program to enable TUTOR authors to locate execution errors in TUTOR lessons.
none;open-ended;authors working with the TUTOR language

INTRODUCTION TO THE TUTOR LANGUAGE (introtutor;1973;1977)
Ghesquiere, James R; Davis, Celia; Thompson, Charlene
Comp.-based Educ. Res. Lab., University of Illinois
This is an introduction to the TUTOR language giving elementary exercises as an introduction to the teacher/author. The lesson is to be used in conjunction with the manual, "Introduction to TUTOR".
none;2 hours;general

Typewriting

BEGINNING TYPING (btype;1976;1977)
Appel, Andrew W
University High School

This is a course to teach the user how to touch type. Upon completion of this course, the student should be able to type reasonably well on PLATO, and should be able to become accustomed to a typewriter.

none;1 1/2 hours;beginning typists - high school/college level

THE DVORAK SIMPLIFIED KEYBOARD/THE AMER. STANDARD KEYBOARD (dvorak;1975;unpublished)
Eisenberg, John D
University of Illinois

This lesson provides typing practice with the Dvorak simplified keyboard and with the American standard keyboard. For instruction and supplemental information, a textbook should be consulted. Each keyboard is drilled in four major sections with ten practice sets, before a five-sentence timed test.

none;open-ended;general

TECHNICAL TYPING DRILL (typing;1979;unpublished)
Worley, Thomas R
University High School, Urbana, Illinois

This lesson provides a one-minute typing drill using random sentences of technical language.

none;open-ended;general

TYPING DRILL (debugs;1975;1977)
Midden, Marshall
Computer-based Educ. Res. Lab., University of Illinois

A typing drill is presented in which the participant can compete against the records of other users. If the new time is better than others, it is listed with some of the other record holders.

none;none;none

Typing
see Typewriting

Ulna

BRACHIUM: CLINICAL APPLICATIONS AND DRILL (antebrl;1977;unpublished)
Miller, David B
School of Basic Medical Sciences, Univ. of Illinois

In this quiz lesson, the student is asked to identify gross anatomical structures of the forearm. PLATO graphics are used as the source for questions. Bone fractures and a knife puncture are used in this practical anatomy approach.

none;15 minutes;first year medical students

HUMAN SKELETAL SYSTEM: PART VI - THE ARM (skelsys6;1978;unpublished)
Wadsworth, Gladys E
School of Medicine, Univ. of Maryland, Baltimore
This osteology lesson presents the bones of the arm and forearm. The surfaces, borders and markings of the humerus, radius and ulna are illustrated and described. Directions are included for palpating the parts of these bones which are subcutaneous and readily felt in the living body. A post-test evaluates the learning experience.
none;20 minutes;first year medical students

Ultrasonic transducers

ULTRASONIC BLOOD FLOW MEASUREMENT (bioinstl;1978;1979)
Beck, Howard W; Olson, Walter H
Dept. Elec. Engineering, U of I, Urbana, Ill.
This lesson simulates the use of ultrasound for measuring the velocity of blood flow through the vessels.
none;none;college/university students

Unemployed

INFLATION (inflation;1978;unpublished)
Paden, Donald W; Barr, Michael
Economics Department, University of Illinois
In this lesson several causes of inflation are examined, the reason for unemployment is reviewed and the relationship between unemployment and inflation is discussed.
none;none;college/university students of economics

Urbanization

MIGRATION AND URBANIZATION MODEL (migl;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this model lesson, projections using migration and urbanization variables can be graphed. Both internal and international migration can be examined. Variables can be changed for each projection.
none;open-ended;persons studying populations

Urinary organs

FUNDAMENTALS OF URINE FORMATION (uformr;1974;1978)
Dorner, J L; Dulisch, M L
College of Veterinary Medicine, University of Illinois
The lesson explains how urine is formed and excreted from the body. Renal anatomy diagrams and terminology are described and the physiology of urine formation is presented with illustrations.
none;1-2 hours;professional students in veterinary medicine

Urine--Analysis and pathology

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART I
(bbcarle4a;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This is the first of a lesson series on renal function and laboratory evaluation and provides students with a basic understanding of renal physiology and function.
none;none;1st year med. and med. tech. students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART II
(bbcarle4;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This is second in a series of three lessons, and familiarizes the student with the laboratory tests used in urinalysis, the evaluation of renal function and the principles behind these tests.
none;none;1st year med. and med. tech. students

URINALYSIS: LABORATORY EVALUATION OF RENAL FUNCTION, PART III
(bbcarle4c;1976;unpublished)
McLane, Michael
Carle Foundation Hospital, Urbana, Illinois
This lesson provides the quiz over the first two parts of this series and offers the student a chance for self-assessment over renal function and laboratory evaluation.
none;none;1st year med. and med. tech. students

Utility programs

Debugging in computer science

BUFFER DISPLAY - DEBUGGING OPTION (showit;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., University of Illinois
The program is a debugging utility which lets the programmer quickly display everything in a buffer so as to locate data.
none;open-ended;PLATO authors

EXECUTION ERROR LOCATOR (execfind;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., Univ. of Illinois
The program is a utility program to enable TUTOR authors to locate execution errors in TUTOR lessons.
none;open-ended;authors working with the TUTOR language

Editor programs (PLATO)

ANIMEDITOR VERSION 2.0 (animatic;1976;1977)
Frye, G. David
University of Illinois
The ANIMeditor allows one to write animated notes which are not subject to the idiosyncracies of system editors.

The program is an "MFL Tag Team Presentation."
none;open-ended;any PLATO author

COMEDIT - GENERAL PURPOSE COMMON EDITOR (commedit;1977;unpublished)
Duncombe, Kevet
Iowa State University, Ames, Iowa
This general purpose common editor provides most of the features of the system common editor. It allows inspection and editing of information stored in full words or segments and also provides for search, find, transfer, zero, abort and return of the common.
none;open-ended;PLATO authors

DATASET EDITOR (dedit;1976;unpublished)
Fumento, David P; Maslikosa, Marianne M
Comp.-based Educ. Res. Lab., U of I, Urbana, Ill.
This lesson provides a good editor which anyone can use with their own lessons which require code in a source format, commonly an assembler or an interpreter. Several options are available through this lesson which are not a standard part of the TUTOR editor and are accessed by pressing SHIFT-DATA from the "What Dataset?" page.
none;open-ended;authors of PLATO lessons

DATASET SEARCH (dsearch;1976;unpublished)
Galcher, William M
University of Illinois
This utility program can search files which are in "dedit" type format.
none;open-ended;authors of PLATO lessons

DATASET UTILITY PACKAGE (dsedit;1976;1977)
Galcher, William M
University of Illinois
This is a utility program. It is an editor to manipulate datasets.
none;open-ended;none

DEDIT FILE PRINT FORMATTER (dprint;1976;unpublished)
Galcher, William M
University of Illinois
This lesson is designed to provide the user with the ability to format a "dedit" type dataset so that it may be printed by the system printer.
none;open-ended;authors of PLATO lessons

DISPLAY DESIGN EDITOR (dservhelp;1975;unpublished)
Halvorsen, Timothy; Resch, Paul
Comp.-based Educ. Res. Lab., U of I, Urbana
This service utility allows the user to design various graphics or text displays.
none;open-ended;PLATO lesson authors

FILE MODIFICATION SCAN (modscan;1978,79;1979)
Williams, Steven R
Comp.-based Educ. Res. Lab., Univ. of Illinois
This lesson provides the author with a means for scanning files for changes via file modwords. Information returned from scanning may be either screen displayed or sent to a nameset, specially formatted for printing.
none;open-ended;lesson authors

LESSON ACCESS CONTROLLER (accessedit;1978;unpublished)
Roper, William D
Southern Illinois University, Carbondale, IL
The program contains the access editor used by the Lesson Access Controller. The instructions on how to use the editor may be found in lesson "accesscode".
none;open-ended;PLATO site directors

LESSON COMPARATOR (comparator;1978;unpublished)
Friedman, H. George
Department of Computer Science, Univ. of Ill.
This lesson offers the user a utility lesson to compare the source text of any two TUTOR lessons.
none;open-ended;TUTOR lesson authors

NAMESET SCANNER (namescan;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., University of Illinois
The program is a utility program which scans a nameset for an alpha or an octal string. A negative search is also available which shows all records which do not contain an alpha or octal string.
none;open-ended;PLATO authors

NEWSPAPER (newspapers;1977;1978)
Sinder, Dale R
Electrical Engineering Department, Univ. of Illinois
This is a program allowing an author to generate a newspaper containing up to 62 articles, 40 active at one time. The articles may be indexed and cross referenced for search and retrieval. Any number of people may contribute articles to the newspaper. Limited authoring rights may be given to all PLATO users without revealing the common code.
none;open-ended;any PLATO author

RECOVER-A-CHARSET ROUTINE (recover;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., University of Illinois
The program instructs the user in how to recover a "charset" that has been accidently deleted from a TUTOR program. The program also shows how to convert a large "charset" to "char" commands.
none;open-ended;none

RECOVER-A-LINESET ROUTINE (recover1;1978;unpublished)
Prouty, Richard M
Chemistry Dept., Univ. of Illinois, Urbana, IL
The program is a utility which will recover an accidentally deleted lineset. It will also convert a large lineset to -rdraw- commands.
none;open-ended;PLATO authors

TRANSFERRAL OF DATA (transfr;1978;unpublished)
Fisher, Norman R
Comp.-based Educ. Res. Lab., Univ. of Illinois
The program gives instructions to help TUTOR authors transfer data between many types of databases, i.e. datasets and namesets.
none;open-ended;PLATO authors and instructors

Glossaries (PLATO)

GLOSSARY (glossary;1977;1979)
Copland, Bruce C
Comp.-based Educ. Res. Lab., U of I, Urbana
This utility lesson provides a table driven glossary "use"-able by any other lesson.
none;open-ended;PLATO lesson authors

PLATO

ON-PAGE GROUP-USAGE MONITOR (groupop;1979;unpublished)
Syfrig, Nathan F
Indiana University
This lesson enables a user to get a constant update on usage of a group. It includes management options (message and sign-off), detailed information on an individual, and connections to the lesson by other utilities.
none;open-ended;group directors or group-editor package designers

SITE ECS USAGE (rash;1978;unpublished)
Wasserman, Paul
University of Illinois
This program allows the user to monitor the current ECS usage at his/her site. It also allows for a jumpout to a specified lesson when there is enough ECS available (the amount specified by user), to condense or execute the lesson.
none;open-ended;PLATO authors

PLATO "group" records

GROUP RECORDS PRINTING UTILITY (groupprint;1978;unpublished)
Vollmer, Michael S
Language Learning Laboratory, University of Illinois

This program formats group records information into a dataset or nameset, provided by the group director, for printing. The information which may be recorded includes lesson scores, completion data, rosters, statistics, router and student variables.

none;open-ended;PLATO group directors

Vacuum-pumps

THE HITACHI VACUUM SYSTEM (ceml;1976;unpublished)
Davis, Daniel L
Center for Electron Microscopy, U of I, Urbana, Ill.

This is a "how-to-use" lesson that will teach the student to operate the Hitachi Transmission Electron Microscope Vacuum System. The student can then practice his knowledge, using the on-line simulation. A list of things to try is provided.

none;open-ended;students of electron microscopy

Valence

COVALENT BONDING (covalent;1976;unpublished)
Chabay, Ruth
Chemistry Department, University of Illinois

The subject of the lesson is covalent bonding. It discusses electron pair bonds, multiple bonding and the use of Lewis structures to represent covalent bonded compounds. A prerequisite for the lesson is familiarity with the concept of valence electrons and the ability to determine the number of valence electrons for a given element.

none;46 minutes;college/university freshmen

Valence (Theoretical chemistry)

IONIC BONDING (ionic;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois

The lesson deals with the formation and nature of ionic bonds and the use of Lewis Dot structures to represent ionic compounds. The student learns to recognize common types of ionic compounds (acids, bases and salts).

touch panel;27 minutes;college/university students

Vasopressin

PHYSIOLOGY OF ADH (ANTIDIURETIC HORMONE) (physadh;1978;unpublished)
Adams, Lawrence J
Peoria School of Medicine of the Univ. of Illinois

This lesson discusses the synthesis, release and action of the antidiuretic hormone.

none;20 minutes;first year medical students

Vector analysis

A DRILL ON VECTOR BASICS (vectors;1976;1977)
Kane, Dennis
Physics Department, University of Illinois
The drill consists of five exercises involving components, and addition and subtraction of vectors.
none;45 minutes;college/university students in introductory physics

THE RIGHT HAND RULE: DRILL AND PRACTICE (righthand;1977;1978)
Beece, Daniel
Physics Dept., Univ. of Ill., Urbana, Ill.
The lesson carefully explains the meaning of a vector cross product and shows, with illustration, how to determine the sense of such a cross product. The lessons includes a test with fifteen timed trials and a display showing the recent records made by various individuals during the trials.
touch panel;open-ended;students of elem. electricity and magnetism

TWO-DIMENSIONAL KINEMATICS (kinem3;1975;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson introduces and tests the basic concepts of vector displacement, velocity, average velocity, and acceleration. Various applications deal with kicking a football. Circular motion is also treated, including a derivation of the radial acceleration v^2/r. Applications include satellite motion. A mastery quiz ends the lesson.
none;170 minutes;college/university students in introductory physics

THE VECTOR OLYMPICS (vgame;1976;1977)
Sherwood, Bruce Arne
Department of Physics, University of Illinois
This program contains three vector-associated games: estimating lengths of vectors in centimeters, algebraic form of components of a vector in randomly-chosen coordinate frames, and centimeter lengths of components in such frames.
touch panel;open-ended;none

VECTORS (show;1973,1974;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The purpose of this lesson is to give students help in gaining a working understanding of vectors. A review of graphing in x-y coordinates and of sines and cosines is included. A knowledge of vectors and vector notation is extremely important in the study of physics because it provides a compact way to express spatial relationships.
none;50 minutes;college/university students of introductory physics

Vectors

INTRODUCTION TO THE GNOMONIC PROJECTION (gnompr;1977;unpublished)
Curtin, David Y
Chemistry Dept., U. of Illinois, Urbana IL
The lesson, fifth in the Crystallography series, introduces the gnomonic projection as a method of visualizing the three-dimensional arrangement of vectors and planes.
none;none;college and university undergraduate and graduate students

WORKOUT (workout;1976;unpublished)
Sutton, David C; Sherwood, Bruce Arne
Physics Department, University of Illinois, Urbana
This elementary level classical mechanics lesson presents four different games involving work: Polevault, Steeplechase, Hammerthrow and Sabercross.
touch panel;open-ended;physics students

Velocity

KINEMATICS I (kinem1;1970,1972;1977)
Sherwood, Bruce Arne; Peterson, S Bradley; Beece, Daniel
Physics Department, University of Illinois
The lesson presents the basic concepts of position, velocity, acceleration, and time based on the familiar aspects of automobile travel. The lesson includes training in the reading of graphs, and in applying the principles illustrated in the lesson. A mastery quiz is included.
none;40 minutes;college/university students in introductory physics

KINEMATICS II (kinem2;1973,1977;1977)
Sherwood, Bruce Arne; Beece, Daniel
Physics Department, University of Illinois
The lesson presents a simple numerical integration with graphs which leads up to the derivation by the student of the equation $x_f = x_i + v_i t + at^2/2$, the determination of the position of an object given its acceleration. Applications of the concepts and a mastery quiz are included.
none;90 minutes;college/university students in introductory physics

ORBITS (orbits2;1974;unpublished)
Bennett, Carol D; Kane, Dennis
Physics Department, University of Illinois, Urbana
The lesson presents two-dimensional orbit equations and numerical two-dimensional kinematics. Vectors are defined and their proper notation discussed, as well as gravitational acceleration. The procedures are explained and the equations can be plotted.
none;none;physics students

TWO-DIMENSIONAL KINEMATICS (kinem3;1975;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson introduces and tests the basic concepts of vector displacement, velocity, average velocity, and acceleration. Various applications deal with kicking a football. Circular motion is also treated, including a derivation of the radial acceleration v^2/r. Applications include satellite motion. A mastery quiz ends the lesson.
none;170 minutes;college/university students in introductory physics

Venereal diseases
THE CASE OF THE KISSING TELLER (percival;1977;unpublished)
Alora, Angeles; Kemp, Larry; Nelson, Charles D; et al.
U of I Medical School, Cntr. for Ed. Development
In this doctor's office simulation, Percival Snoot has come in complaining of a burning sensation at the tip of his penis. The student takes medical history, physical and lab data, and offers treatment. In addition, the sexual contacts must be followed up and treated for venereal problems of their own.
optional microfiche ;30 minutes;medical students

Ventilation-perfusion ratio
GAS TRANSPORT IN BLOOD (shp89;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas
This lesson focuses on the normal transport of respiratory gases in the blood.
none;2 hours;physicians' assistants

PULMONARY FUNCTION TESTING (shp93;1975;unpublished)
Stutz, David R
Sheppard Air Force Base, Texas
This lesson discusses specific tests which assess a patient's pulmonary function. The student is given a chance to practice interpreting test results for some hypothetical patients.
none;90 minutes;physicians' assistants

Ventricular septal defects
CONGENITAL DEFECTS OF THE HEART AND GREAT VESSELS (pedcard;1977;unpublished)
Green, Michael; Sliwa, W. Gerard
School of Basic Medical Science, Univ. of Illinois
This lesson presents basic physiology and key clinical signs of major congenital defects of the heart and great vessels.
none;none;first year medical students

Verbs
see English language--Grammar

Versification

POETRY COMPOSITION (poetry;1973;unpublished)
Vojacek, Joe
Malcolm X College, Chicago, Illinois

This lesson allows the student to form his own collective concept of the poetic and permits the student to define poetry composed of words randomly selected. There are two sections: kinetic and concrete.

none;15-20 minutes;Literature students, especially poetry

Veterinary anatomy

FUNDAMENTALS OF URINE FORMATION (uformr;1974;1978)
Dorner, J L; Dulisch, M L
College of Veterinary Medicine, University of Illinois

The lesson explains how urine is formed and excreted from the body. Renal anatomy diagrams and terminology are described and the physiology of urine formation is presented with illustrations.

none;1-2 hours;professional students in veterinary medicine

Veterinary anatomy--Terminology

ELECTROCARDIOGRAPHY (ekg0;1974;1978)
Smetzer, David L; Koehn, Charles E
College of Veterinary Medicine, University of Illinois

The lesson describes by animated graphics the sequence of spread of electrical activity through the normal heart and relates the spread of electrical activity to the genesis of the electrocardiogram. The lesson is non-interactive as far as the student is concerned.

none;one hour;students of veterinary medicine

EYE Q - A REVIEW AND SELF-QUIZ ON EYE ANATOMY (eyeq;1974;1978)
Silver, John; Helper, Lloyd C
College of Veterinary Medicine, Univ. of Illinois

This lesson presents a review of the anatomy of an eye by drawing and labelling a large cross section of an eye. The student can request the name of any labelled part. When he has sufficiently learned the parts, the student can take a quiz by naming the part corresponding to the label indicated by the computer.

none;15-30 minutes;Students of veterinary medicine

Veterinary cardiology

THE CARDIAC CYCLE (pcg;1974;1978)
Smetzer, David L; Martin, G S; Koehn, Charles E
College of Veterinary Medicine, Univ. of Illinois

The lesson presents information for the study of the heart beat with regard to electrical events, hemodynamic events and acoustic events. On completion of the lesson the student should be able to specify what events are occurring in the cardiac cycle when a specific event is given.

none;2 hours;professesonal students of veterinary medicine

ELECTROCARDIOGRAPHY (ekg0;1974;1978)
Smetzer, David L; Koehn, Charles E
College of Veterinary Medicine, University of Illinois

The lesson describes by animated graphics the sequence of spread of electrical activity through the normal heart and relates the spread of electrical activity to the genesis of the electrocardiogram. The lesson is non-interactive as far as the student is concerned.

none;one hour;students of veterinary medicine

Veterinary histology

CYTOLOGY (cyter;1974;1978)
Silver, John; Shales, Thomas; Kenner, Gerry H
College of Veterinary Medicine, Univ. of Illinois

The lesson provides instruction in cell physiology and structure for students in a beginning course in histology. Material in the lesson is based on Arthur W. Ham's Histology, 7th edition, Lippincott, Philadelphia (1974).

none;none;none

Veterinary hygiene

ANTEMORTEM AND POSTMORTEM INSPECTION PROCEDURES (apip;1974;unpublished)
Grimes, George M; Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois

The purpose of the lesson is to help the student learn how to perform antemortem and postmortem inspections using proper procedures in accordance with the U. S. Department of Agriculture regulations. The student should be able to recognize and prescribe humane slaughter procedures and proper facilities and equipment for making the inspections.

slide selector, microfiche;2 hours;professonal students of veterinary medicine

PASTEURIZATION OF MILK AND DAIRY PRODUCTS (vmpastp;1975;1978)
Grimes, George M; Holt, Elsbeth
College of VeterinaryMedicine, Univ. of Illinois

The lesson attempts to acquaint the student with the three main types of pasteurization processes in which pathogenic organisms may be destroyed without materially altering the flavor or consistency of milk.

touch panel (opt.) slide selector, microfiche;1 hour; vet med students

TRANSMISSION OF ZOONOSES (zdis;1975;1979)
Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois

The lesson discusses the transmission of zoonoses which are diseases transmitted from animals to man.

none;1 hour;professional students of veterinary medicine

VETERINARY PUBLIC HEALTH ASPECTS OF MILK AND DAIRY PRODUCTS (milkp;1974;1978)
Grimes, George M; Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois
The lesson provides a general knowledge of the veterinary public health aspects of defense against disease from milk and dairy products. The various sources of contamination and adulteration are indicated, the defenses appropriate to prevent disease, and the inspection responsibility and authority.
none;2 hours;professional students of veterinary medicine

Veterinary medicine

HORMONAL CONTROL: CARBOHYDRATE AND LIPID METABOLISM (endo;1978;unpublished)
Jackson, Gary L; Johnson, E. Wayne; Trynda, Richard S
College of Veterinary Medicine, University of Illinois
In this program the user will study the effects of five hormones on the levels of blood glucose and the stimuli for their release, as well as the mechanism of muscle, liver and adipose cell response to the same five hormones. A short quiz is given after each section and a comprehensive quiz may be taken at the end of the lesson.
none;none;students of veterinary medicine

HORSE TALK (equine2;1975;unpublished)
Silver, John; Knobloch, Cheryl P
College of Veterinary Medicine, University of Illinois
This lesson is a drill in the jargon of the stable. It presents 71 terms or phrases describing conformational faults and lamenesses of horses. Quizzes are included for self-assessment.
touch panel;none;students of veterinary medicine

IDENTIFICATION OF HORMONE UNKNOWNS (hormo;1974;unpublished)
Jackson, Gary L; Trynda, Richard S
College of Veterinary Medicine, University of Illinois
In this lesson, one hormone will be randomly selected from twenty mammalian hormones stored in the computer, and presented as an unknown. The user is to run tests on the unknown and gather data on its effects on various parameters.
none;none;students of veterinary medicine

Veterinary medicine--Examinations, questions, etc.

HORSE TALK (equine2;1975;unpublished)
Silver, John; Knobloch, Cheryl P
College of Veterinary Medicine, University of Illinois
This lesson is a drill in the jargon of the stable. It presents 71 terms or phrases describing conformational faults and lamenesses of horses. Quizzes are included for self-assessment.
touch panel;none;students of veterinary medicine

Veterinary medicine--Terminology

EPIDEMIOLOGY TERMINOLOGY (epidemt;1974;1978)
Grimes, George M; Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois

The lesson is an exercise in recognizing various epidemiology terms when given a definition. On completion of the lesson the student should be able to read and study epidemiology materials with greater ease and more understanding.

touch panel (optional);30-60 minutes;students in veterinary medicine

EYE Q - A REVIEW AND SELF-QUIZ ON EYE ANATOMY (eyeq;1974;1978)
Silver, John; Helper, Lloyd C
College of Veterinary Medicine, Univ. of Illinois

This lesson presents a review of the anatomy of an eye by drawing and labelling a large cross section of an eye. The student can request the name of any labelled part. When he has sufficiently learned the parts, the student can take a quiz by naming the part corresponding to the label indicated by the computer.

none;15-30 minutes;Students of veterinary medicine

HORSE TALK (equine2;1975;unpublished)
Silver, John; Knobloch, Cheryl P
College of Veterinary Medicine, University of Illinois

This lesson is a drill in the jargon of the stable. It presents 71 terms or phrases describing conformational faults and lamenesses of horses. Quizzes are included for self-assessment.

touch panel;none;students of veterinary medicine

Veterinary ophthalmology

COLLIE EYE ANOMALY (collie;1974;unpublished)
Silver, John; Helper, Lloyd C
College of Veterinary Medicine, Univ. of Illinois

The lesson explains the various manifestations of Collie Eye Anomaly by means of pictures and text. The quiz section tests for ability to identify pathologic conditions present in several Collies and to evaluate the relationship of Collie Eye Anomaly to breeding.

touch panel (opt.) slide selector, microfiche;20-30 min.;vet med students

EYE Q - A REVIEW AND SELF-QUIZ ON EYE ANATOMY (eyeq;1974;1978)
Silver, John; Helper, Lloyd C
College of Veterinary Medicine, Univ. of Illinois

This lesson presents a review of the anatomy of an eye by drawing and labelling a large cross section of an eye. The student can request the name of any labelled part. When he has sufficiently learned the parts, the student can take a quiz by naming the part corresponding to the label indicated by the computer.

none;15-30 minutes;students of veterinary medicine

THE PUPILLARY LIGHT REFLEX (puflex;1974;unpublished)
Silver, John; Marshall, Arvle E; Helper, Lloyd C
College of Veterinary Medicine, Univ. of Illinois

This lesson provides five clinical cases illustrating the pupillary light reflex. Completion of the lesson should enable the student to test the pupillary light reflex and use that knowledge in assessing blindness and the extent of some types of lesions.

none;none;students of veterinary medicine

Veterinary pathology

FUNDAMENTALS OF URINE FORMATION (uformr;1974;1978)
Dorner, J L; Dulisch, M L
College of Veterinary Medicine, University of Illinois

The lesson explains how urine is formed and excreted from the body. Renal anatomy diagrams and terminology are described and the physiology of urine formation is presented with illustrations.

none;1-2 hours;professional students in veterinary medicine

Virology

BASIC VIROLOGY IIA: VIRAL MULT. (ADSORP. THROUGH ECLIPSE) (kvirus2;1975;unpublished)
Wagner, Kenneth; Cohen, Paul; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois

The lesson is a combination of linear and quiz formats. Information concerning the viral multiplication phases, adsorpton, penetration, and eclipse of both animal viruses and bacteriphages are accessed via a quiz on a textual and diagrammatic instructional section. The student may be branched to instructional material based upon quiz results.

none;20 minutes;first year medical students

BASIC VIROLOGY IIB: VIRAL MULT. (REPLICATION THRU RELEASE) (kvirus3;1975;unpublished)
Wagner, Kenneth; Cohen, Paul; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois

The viral multiplication phases, replication, maturation and release, of both animal viruses and bacteriophages are presented, either in a quiz over each phase, or in a textual and diagrammatic instructional section. The process of lysogeny is discussed in the release phase. After the quiz, the student may be urged to study instructional material.

none;20 minutes;first year medical students

BASIC VIROLOGY III: VIRAL DIAGNOSTIC TECHNIQUES (kvirus4;1975;unpublished)
Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

This lesson presents information the physician must consider for appropriate specimen collection in suspected viral infections. Via tutorial and quiz formats, various tests are utilized in diagnosing viral infections and the interpretation of the test results are presented.

none;20 minutes;first year medical students

BASIC VIROLOGY IVA: MAJ. VIRAL GROUPS, SMALL DNA (kvirus5a;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson presents to the student in a linear interrogative format, information dealing with small-size DNA viral groups such as Papovavirus and Hepatites. A short history, structural characteristics, classification, and diseases caused are given for each group. A diagnostic review quiz over the two viral groups is also available.

none;20 minutes;first year medical students

BASIC VIROLOGY IVB: MAJ. VIRAL GROUPS, MEDIUM DNA VIRUSES (kvirus5b;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson presents to the student in a linear interrogative format, information dealing with medium-size DNA virus groups such as Adenoviruses and Herpesviruses. Parvoviruses are included in the adenovirus discussion. A short history, structural characteristics, morphology, classification, and diseases caused are given for each group. Quiz available.

slide selector, microfiche (optional);20 minutes;first year medical students

BASIC VIROLOGY IVC: MAJ. VIRAL GROUPS, LARGE DNA (kvirus5c;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois

The lesson presents to the student in a linear interrogative format, information dealing with large-size DNA viruses such as Poxviruses. A short history, structural characteristics, morphology, classification, and diseases caused are given. A diagnostic review quiz over poxviruses is also available.

slide selector, microfiche (optional);20 minutes;first year medical students

BASIC VIROLOGY I: STRUCTURAL CHARACTERISTICS OF THE VIRION (kvirus;1975;unpublished)
Wagner, Kenneth; Johnson, Marcia
School of Basic Medical Scieneces, Univ. of Illinois

The lesson presents basic information concerning viral morphology, e.g. capsids, capsomeres, nucleocapsids, and information concerning the various symmetries exhibited by virus particles, e.g. icosahedral, helical, complex, and 5:3:3: rotational symmetry.

slide selector, microfiche;20 minutes;first year medical students

Virology--Examinations, questions, etc.

BASIC VIROLOGY IVD: VIRAL GROUPS - DNA VIRUS QUIZ (kvirus5d;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The student is quizzed over any information presented in PLATO lessons: Basic Virology IVa, IVb, IVc, covering DNA viruses. A quiz of ten questions may be taken over an individual group or a quiz of 10-72 questions may be taken over all viral groups discussed. Self-evaluation and diagnosis is provided at the quiz completion.
none;35 minutes;first year medical students

Viruses

BASIC VIROLOGY IIA: VIRAL MULT. (ADSORP. THROUGH ECLIPSE)
(kvirus2;1975;unpublished)
Wagner, Kenneth; Cohen, Paul; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
The lesson is a combination of linear and quiz formats. Information concerning the viral multiplication phases, adsorpton, penetration, and eclipse of both animal viruses and bacteriphages are accessed via a quiz on a textual and diagrammatic instructional section. The student may be branched to instructional material based upon quiz results.
none;20 minutes;first year medical students

BASIC VIROLOGY IIB: VIRAL MULT. (REPLICATION THRU RELEASE)
(kvirus3;1975;unpublished)
Wagner, Kenneth; Cohen, Paul; Johnson, Marcia
School of Basic Medical Sciences, Univ. of Illinois
The viral multiplication phases, replication, maturation and release, of both animal viruses and bacteriophages are presented, either in a quiz over each phase, or in a textual and diagrammatic instructional section. The process of lysogeny is discussed in the release phase. After the quiz, the student may be urged to study instructional material.
none;20 minutes;first year medical students

BASIC VIROLOGY IVA: MAJ. VIRAL GROUPS, SMALL DNA (kvirus5a;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents to the student in a linear interrogative format, information dealing with small-size DNA viral groups such as Papovavirus and Hepatites. A short history, structural characteristics, classification, and diseases caused are given for each group. A diagnostic review quiz over the two viral groups is also available.
none;20 minutes;first year medical students

BASIC VIROLOGY IVB: MAJ. VIRAL GROUPS, MEDIUM DNA VIRUSES
(kvirus5b;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents to the student in a linear interrogative format, information dealing with medium-size DNA virus groups such as Adenoviruses and Herpesviruses. Parvoviruses are included in the adenovirus discussion. A short history, structural characteristics, morphology, classification, and diseases caused are given for each group. Quiz available.
slide selector, microfiche (optional);20 minutes;first year medical students

BASIC VIROLOGY IVC: MAJ. VIRAL GROUPS, LARGE DNA (kvirus5c;1975;unpublished)
Johnson, Marcia; Wagner, Kenneth; Cohen, Paul
School of Basic Medical Sciences, Univ. of Illinois
The lesson presents to the student in a linear interrogative format, information dealing with large-size DNA viruses such as Poxviruses. A short history, structural characteristics, morphology, classification, and diseases caused are given. A diagnostic review quiz over poxviruses is also available.
slide selector, microfiche (optional);20 minutes;first year medical students

Vision

INTRODUCTION TO OPTICAL MICROSCOPY (mscope;1977;unpublished)
Snellen, James E
School of Basic Medical Sciences, Univ. of Illinois
This lesson acquaints the student with some of the fundamental principles of optical microscopy. It includes the nature of vision, different types of lenses, and the optical microscope.
none;15 minutes;first year medical students

Vitamin metabolism

FAT-SOLUBLE VITAMINS (vitc;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson discusses the fat-soluble vitamins which are composed of only carbon, hydrogen and oxygen, and can be stored in the body.
none;25-30 minutes;nutrition students

WATER-SOLUBLE VITAMINS (vit2;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson discusses the vitamins not stored in the body. The requirements and functions of the water-soluble vitamins are presented, as well as food origins and methods of food preparation so as to best utilize and maintain the vitamin contents.
none;25-30 minutes;nutrition students

Vitamins

DRUGS: INTRODUCTION TO VITAMINS (kumc54;1975;unpublished)
Kansas University Medical Center; Felty, Michael; Cohen, Barry; et al.
University of Kansas / University of Illinois
This lesson reviews, in question and answer format, the physiological and biochemical functions of vitamins.
none;20 minutes;first year medical students

VITAMINS III: THE WATER SOLUBLE VITAMINS (mvit3;1975;unpublished)
Agee, C. Coe; Jones, Peter D
School of Basic Medical Sciences, Univ. of Illinois
This lesson presents material on the nutritional, biochemical and pharmacological characteristics of the water soluble vitamins Niacin, Pantothenic acid, Folic acid, Ascorbic acid and Biotin. For each vitamin, there is a short quiz.
none;5 minutes;first year medical students

VITAMINS II: THE WATER SOLUBLE VITAMINS (mvit2;1975;unpublished)
Agee, C. Coe; Jones, Peter D
School of Basic Medical Sciences, Univ. of Illinois
This lesson, one of a series of three, explains and summarizes various nutritional, biochemical and pharmacological aspects of the water soluble vitamins B_1, B_2, B_6 and B_{12}.
none;15 minutes;first year medical students

VITAMINS I: COMPREHENSIVE QUIZ (mvit1;1975;unpublished)
Agee, C. Coe; Jones, Peter D
School of Basic Medical Sciences, Univ. of Illinois
This quiz is one of a series of three lessons which presents certain nutritional, biochemical and pharmacological aspects of nine vitamins. The lesson covers the structures, nomenclature, biochemistry, nutrition and pharmacology of the water soluble vitamins.
none;15 minutes;first year medical students

Vitamins in human nutrition

FAT-SOLUBLE VITAMINS (vitc;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I
This lesson discusses the fat-soluble vitamins which are composed of only carbon, hydrogen and oxygen, and can be stored in the body.
none;25-30 minutes;nutrition students

WATER-SOLUBLE VITAMINS (vit2;1977;unpublished)
LaFont, Frances M
School of Human Resources and Family Studies, U of I

This lesson discusses the vitamins not stored in the body. The requirements and functions of the water-soluble vitamins are presented, as well as food origins and methods of food preparation so as to best utilize and maintain the vitamin contents.

none;25-30 minutes;nutrition students

Vocabulary

English language--Foreign students

VOCABULARY AND CULTURE LESSONS (PETER ADAMS LESSONS) (nesl1;1976;unpublished)
Pech, William; Groupe, Alan; Banks, Fred
Division of English as a Second Language, U. of Ill.

The Vocabulary and Culture Lessons (Peter Adams Lessons) are designed to simultaneously 1) introduce the student to some basic "real-world" vocabulary, 2) acquaint the student with some important aspects of American culture, and 3) subtly check the student on certain grammatical points.

touch panel;ability dependent;foreign students improving their English

English language--Word formation

STRUCTURAL ANALYSIS OF WORDS (wordanal;1979;unpublished)
Sykes, Wylmarie Nicholson; Sweany, Joan
Malcolm X City College, Chicago, Illinois

This lesson is designed to introduce the PLATO student to the structural analysis of words. Emphasis is placed on knowledge of the function and meaning of a few basic root words, prefixes and suffixes. The lesson is intended to serve as a foundation for vocabulary lessons on PLATO which teach Greek and Latin root words, prefixes and suffixes.

none;open-ended;none

UI-UC CLASSICS DEPARTMENT LESSON INDEX (classics;1977,78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois

This lesson provides an index to lessons available to users interested in the study of classics and related topics. Also included are vocabulary building lessons.

optional touch panel;open-ended;students of classics

WORD POWER - ANALOGY EXERCISES (vocla;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois

Seven lessons provide exercises for vocabulary building, emphasizing the use of analogies to increase understanding of verbal relationships.

optional touch panel;50 minutes/lesson;college/university students

WORD POWER - BASIC ROOTS (voclb;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
Fourteen vocabulary-building lessons present material on the derivation of English words from Latin (and some Greek) roots.
optional touch panel;50 minutes/lesson;college/university students

WORD POWER - INTENSIVE ROOTS (vocli;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
Twenty lessons provide intensive practice for Latin roots and their English word families.
optional touch panel;50 minutes/lesson;college/university students

WORD POWER - SPECIAL TOPICS (vocls;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
Three lessons present vocabulary words related to special topics, such as, numerals, anatomical terms, abbreviations, Latin phrases, and words and phrases from mythology.
optional touch panel;50 minutes for each lesson;college/university

WORD POWER - STANDARDIZED VOCABULARY EXAMS (voclt;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
Two lessons provide examinations over the "Word Power" vocabulary building lessons. This is test number one. Test number two can be found in "voc2t".
optional touch panel;none;college/university students

WORD POWER (INDEX) (voc0;1978;1976)
Scanlan, Richard T
Classics Department, University of Illinois
This lesson contains the index and introduction to a series of 46 lessons on English vocabulary building. The lessons deal with prefixes, suffixes, word roots, and special topics.
optional touch panel;approximately 37 hours;college/university students

WORDSTUDY I-VI (voc;1977,78;unpublished)
Siegel, Martin A; Becker, Ruth R; Gilpin, Mariellen O; et al.
PLATO Corrections Project, CERL, Univ. of Ill.
These vocabulary tutorials and drills were developed for adolescent and adult students with low performance abilities. There are six parts, each part containing five lessons with two sections. Given a base word, the student is quizzed until he knows a meaning for that word. Then various forms of that base word are explored and used in used in sentences.
none;25 hours;third - eighth grade level readers

Voice culture

EXERCISES IN VOCAL DICTION (musvocal;1976;1978)
Gieszelman, Diane L; Sanders, William H
Music Department, University of Illinois
The lesson is designed to provide an introduction to the vocal articulators and their uses. It is intended as a supplement to any textbooks or reference books on the subject.
none;none;music students taking voice instruction

Volume

Gases

BEHAVIOR OF GASES (shp63;1975;unpublished)
Eyl, Arland W
Sheppard Air Force Base, Texas
This lesson discusses the properties of gases and their measurement and the pressure, volume and temperature relationships.
none;60 minutes;physicians' assistants

PROPERTIES OF IDEAL GASES (gaslaws;1976;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson deals with the relationship between the pressure that gas exerts on the walls of a container and its temperature, volume, and number of moles of gas in the container. It provides the experimental derivation of the ideal gas laws.
touch panel;67 minutes;college/university chemistry students

PV=NRT, SOLVING PROBLEMS USING THE IDEAL GAS LAW (pvnrt;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
The lesson teaches the student how to solve problems using the ideal gas law, PV=nRT. It is assumed that the student knows how to solve simple mathematical equations for any value of each variable and to use units correctly including the conversion between units, but a quick review of the necessary algebra for the required manipulation is given.
touch panel;24 minutes;college/university students

SOLVING IDEAL GAS LAW PROBLEMS: CHANGING CONDITIONS (pvt;1976;1977)
Chabay, Ruth
Chemistry Department, University of Illinois
In this lesson the student practices calculating the final values of the variables in the ideal gas law equation when the initial conditions are given and there are changes in the variables. Boyles' and Charles' Laws are presented and problems involving those laws are also included.
touch panel;17 minutes;college/university students

--(Cubic content)
PITCHER POURING PROBLEMS (wmg03;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois
The lesson presents a series of problems based on an animation of pouring liquids from one pitcher to another. The lesson teaches volume measurements.
touch panel;none;elementary school children

Vowels
SYLLABICATION AND ACCENTING (sound3;1976, 1979;unpublished)
Sweany, Joan
Malcolm X College, Chicago, Illinois
This lesson aquaints the student with the vowel symbols, syllable division and accentuation used in a dictionary pronunciation guide. The lesson first introduces the symbols for twenty vowel and dipthong sounds. Then syllables are defined and accents are explained. Exercises are included for student practice.
none;35 minutes;First year college English students

Wage-price policy
INFLATION (inflation;1978;unpublished)
Paden, Donald W; Barr, Michael
Economics Department, University of Illinois
In this lesson several causes of inflation are examined, the reason for unemployment is reviewed and the relationship between unemployment and inflation is discussed.
none;none;college/university students of economics

Wave Equation
PARTIAL DIFFERENTIATION AND THE WAVE EQUATION (waveqn;1973;1978)
Bennett, Carol D
Physics Department, Universtiy of Illinois
The lesson contains exercises on solutions of the "wave equation" by partial differentiation. After the student has finished the exercises, he/she must complete a quiz of three problems in order to obtain credit for completing the lesson.
none;none;students of modern physics or quantum mechanics

Wave function
INFINITE SQUARE-WELL POTENTIAL (infinite;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois
The lesson presents the properties of infinite square-well wave functions and energies. Graphical representations illustrate the explanations.
none;none;college/university students of modern physics

Waves
see Optics

Weather forecasting

CLIMATOLOGICAL DATA FOR URBANA (cuweather;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this lesson, climatological data for Urbana can be graphed. A list of variables is provided.

This lesson is part of the Population Dynamics package.
none;open-ended;persons studying population or weather forecasting

SEQUENCE REPORTS (weather;1976;1977)
Lombardo, David A
University of Illinois
The lesson teaches how to determine existing weather at the starting point, enroute and at the terminal point of a proposed plane trip by reading and correctly interpreting weather teletype information broadcast by the FAA.
none;none;general

WEATHER HISTORY ANALYSIS (cuwtemp;1976;unpublished)
Population Dynamics Group; Handler, Paul; Carlson, Sylvia; et al.
Coordinated Science Laboratory, University of Illinois
Through the use of this lesson, weather history can be charted and analyzed. Lists of available variables are provided. This lesson is part of the Population Dynamics package.
none;open-ended;persons studying population or weather forecasting

Weighing machines

A SIMULATION OF AN ANALYTICAL BALANCE (balance;1977;unpublished)
Moore, Carolynn
Chemistry Department, University of Illinois
This lesson is a simulation of an analytical balance. It provides the student with the opportunity to practice weighing samples.
touch panel;none;college/university students of elementary chemistry

USING THE BALANCE (weight;1974;1977)
Smith, Stanley
Chemistry Department, University of Illinois
The lesson describes a common type of chemical balance, the Mettler Balance. Practise problems in reading the balance are presented.
microfiche;34 minutes;college/university students of elementary chemistry

Weights and measures

Metric system

BASIC METRIC CONVERSIONS (shp12;1974;unpublished)
Mosley, Richard L
Sheppard Air Force Base, Texas

This lesson will teach the student to convert fractions to decimal expression and metric measurements of weight, length and volume to their subdivisions of metric form. The student will also learn to calculate the amount of medication to administer to a patient, given the doctor's order and the amount of medication in each tablet.

none;20-30 minutes;physicians' assistants

MATHEMATICS OF DRUGS AND SOLUTIONS (metapo;1975;1979)
Bitzer, Maryann; Lyman, Elisabeth R; McManus, Bonnie
Mercy Hospital School of Nursing, Urbana, Ill.

After completing the lessons in this unit, the student should be able to recognize the most commonly used units in the metric and apothecary systems of measurement, compute equivalent dosage of medication utilizing the metric and apothecary system of measurement and solve problems related to drugs and solution dosages.

none;none;nursing students

THE METRIC SYSTEM (liter;1975;1977)
Chabay, Ruth
Chemistry Department, University of Illinois

The lesson introduces units of length, mass, volume, temperature. Emphasis is placed on conversion both within the metric system (eg liters to ml) and from English to metric unit. Dimensional analysis is stressed. An attempt is made to give a feeling for metric units.

none;58 minutes;college/university freshmen

Volume (Cubic content)

PITCHER POURING PROBLEMS (wmg03;1977;1977)
Golden, William M
Comp.-based Educ. Res. Lab., University of Illinois

The lesson presents a series of problems based on an animation of pouring liquids from one pitcher to another. The lesson teaches volume measurements.

touch panel;none;elementary school children

Winds

WIND TRIANGLES (wind;1978;unpublished)
Trollip, Stanley R
Institute of Aviation, U of I, Urbana, Illinois

This lesson describes the E6b Computer used to solve wind triangle problems and presents problems for practice.

none;none;students of aviation

Wit and humor

COMPUTER JOKES (jokes;1977;1978)
Nievergelt, Jurg; Friedman, H. George
Department of Computer Science, University of Illinois
This lesson contains a collection of computer jokes and cartoons.
none;open ended;everyone

Word formation

STRUCTURAL ANALYSIS OF WORDS (wordanal;1979;unpublished)
Sykes, Wylmarie Nicholson; Sweany, Joan
Malcolm X City College, Chicago, Illinois
This lesson is designed to introduce the PLATO student to the structural analysis of words. Emphasis is placed on knowledge of the function and meaning of a few basic root words, prefixes and suffixes. The lesson is intended to serve as a foundation for vocabulary lessons on PLATO which teach Greek and Latin root words, prefixes and suffixes.
none;open-ended;none

UI-UC CLASSICS DEPARTMENT LESSON INDEX (classics;1977,78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
This lesson provides an index to lessons available to users interested in the study of classics and related topics. Also included are vocabulary building lessons.
optional touch panel;open-ended;students of classics

WORD POWER - ANALOGY EXERCISES (vocla;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
Seven lessons provide exercises for vocabulary building, emphasizing the use of analogies to increase understanding of verbal relationships.
optional touch panel;50 minutes/lesson;college/university students

WORD POWER - BASIC ROOTS (voclb;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
Fourteen vocabulary-building lessons present material on the derivation of English words from Latin (and some Greek) roots.
optional touch panel;50 minutes/lesson;college/university students

WORD POWER - INTENSIVE ROOTS (vocli;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
Twenty lessons provide intensive practice for Latin roots and their English word families.
optional touch panel;50 minutes/lesson;college/university students

WORD POWER - SPECIAL TOPICS (vocls;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
Three lessons present vocabulary words related to special topics, such as, numerals, anatomical terms, abbreviations, Latin phrases, and words and phrases from mythology.
optional touch panel;50 minutes for each lesson;college/university

WORD POWER - STANDARDIZED VOCABULARY EXAMS (voclt;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
Two lessons provide examinations over the "Word Power" vocabulary building lessons. This is test number one. Test number two can be found in "voc2t".
optional touch panel;none;college/university students

WORD POWER (INDEX) (voc0;1978;1976)
Scanlan, Richard T
Classics Department, University of Illinois
This lesson contains the index and introduction to a series of 46 lessons on English vocabulary building. The lessons deal with prefixes, suffixes, word roots, and special topics.
optional touch panel;approximately 37 hours;college/university students

WORDSTUDY I-VI (voc;1977,78;unpublished)
Siegel, Martin A; Becker, Ruth R; Gilpin, Mariellen O; et al.
PLATO Corrections Project, CERL, Univ. of Ill.
These vocabulary tutorials and drills were developed for adolescent and adult students with low performance abilities. There are six parts, each part containing five lessons with two sections. Given a base word, the student is quizzed until he knows a meaning for that word. Then various forms of that base word are explored and used in used in sentences.
none;25 hours;third - eighth grade level readers

Word formation--Examinations, exercises, etc.

WORD POWER - STANDARDIZED VOCABULARY EXAMS (voclt;1975-78;unpublished)
Scanlan, Richard T
Classics Department, University of Illinois
Two lessons provide examinations over the "Word Power" vocabulary building lessons. This is test number one. Test number two can be found in "voc2t".
optional touch panel;none;college/university students

Work (Physics)

STORED ENERGY (work;1977;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois
The lesson treats the general work-energy equation, including thermal and other internal energies (essentially the first law of thermodynamics, but in a mechanics setting) with emphasis on how the choice of subsystem affects the form of work-energy equation.
touch panel;80 minutes;college/ university

WORK AND KINETIC ENERGY (FOR CONSTANT FORCES) (dz;1975;1978)
Kane, Dennis
Physics Department, University of Illinois
The lesson discusses work and kinetic energy for constant forces. The sections on work and on kinetic energy each begin with a review of the basic concepts involved. The lesson ends with a quiz which must be completed to obtain credit for completing the lesson.
none;70 minutes;college/university

WORK DONE BY POSITION-DEPENDENT FORCES (kane1;1975;1977)
Kane, Dennis
Physics Department, University of Illinois
The work done by position-dependent forces is presented in this lesson. The work done by step function forces is explained and illustrated. The student divides a force-distance curve into successively smaller steps to approach an integral. Applications shown include work done by a spring.
none;20 minutes;college/university students in introductory physics

WORKOUT (workout;1976;unpublished)
Sutton, David C; Sherwood, Bruce Arne
Physics Department, University of Illinois, Urbana
This elementary level classical mechanics lesson presents four different games involving work: Polevault, Steeplechase, Hammerthrow and Sabercross.
touch panel;open-ended;physics students

Worms, Intestinal and parasitic

EXTRAINTESTINAL ANTIHELMINTHICS (exhel;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center
This lesson presents the chemotherapeutic treatment for extraintestinal helminths. It includes the drug spectra, modes of action, indications and contrindications. Questions are incorporated for interaction and for self-evaluation.
optional touch panel;30 minutes;first year medical students

INTESTINAL ANTHELMINTHICS (helminth;1978;unpublished)
Byrd, Daniel M; Smith, Terrald J; McCraw, Gordon W
Oklahoma University Health Sciences Center

This lesson presents the chemotherapeutic treatment for intestinal helminths. It includes drug spectra, modes of action, indications and contraindications. Questions are incorporated for interaction and self-assessment of subject mastery.

optional touch panel;30 minutes;first year medical students

XY plotters

CONTROL SYSTEMS ANALYSIS (rootlocus;1976;1979)
Beck, Howard W
Dept. of Elec. Engineering, U of I, Urbana, Ill.

The techniques used in this lesson are designed for the analysis of a basic closed loop configuration with unity feedback. The program is useful as a utility program for engineering mathematics.

none;open-ended;engineering and mathematics students

GRAFIT PROGRAMMING FACILITY (grafit;1971;1977)
Sherwood, Bruce Arne
Physics Department, University of Illinois

GRAFIT is a programmable calculator which graphs the results. The program provides a simple programming language with inherent graphical output, designed to assist science students to compute and graph results for small calculations. The program is a general service type program, not a lesson.

none;open-ended;college/university science students

NUMERICAL ANALYSIS UTILITY (calc;1973;1978)
Bennett, Carol D
Physics Department, University of Illinois

This is a utility program to aid in numerical analysis. The program provides an elaborate calculator and x-y function plotter with user-defined functions A-Z and variables a-z.

none;open-ended;students of mathematics and physics

X-ray crystallography

AXES, POINTS, LINES, PLANES (axes;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL

The lesson, first in the crystallography series, presents the mathematical representation of points, lines and planes in the everyday 3-D coordinate system used by crystallographers, both classical and X-ray. Part 4 of the lesson introduces the method by which an oblique axial system is utilized in building up a crystal structure.

none;none;college and university undergraduate and graduate students

ELEMENTARY CRYSTALLOGRAPHY (elcrysta; 1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Illinois, Urbana, IL
This lesson is the introduction to a series of lessons presenting methods of utilizing X-ray crystallographic data in the solution of chemical problems. The series is divided into three sections.

none;none;college or university undergraduate and graduate students

THE RECIPROCAL LATTICE (rcplt;1977;unpublished)
Curtin, David Y
Chemistry Dept., Univ. of Ill., Urbana, IL
The lesson, the second in the series of lessons on Elementary Crystallography, introduces the concept of the reciprocal lattice in order to permit its application to the calculations in the lesson on the Metric Tensor and the representation of the geometry of planes in the lessons on the Use of the Optical Goniometer and Gnomonic Projections.
none;none;college and university undergraduate and graduate students

Zoology

Statistics

A SELF-CONTAINED LAB. WITH A "SIMPLE" BEHAVIOR (kinesis;1972;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses a stochastic "choice" algorithm and animation to demonstrate orientation behavior in a "bug" exposed to variable stimuli. Students determine the quality (+ or -) and strength of the stimulus, and record "end points" of bug travel. A statistical (chi-square) evaluation of the hypothesis of random distribution is then made.
optional manual;45 minutes;university/college biology students

COMPARATIVE SEROLOGY (serology;1974;unpublished)
Hyatt, Gary; Eades, David C
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses "open-ended" investigatory techniques to allow students to build two phylogenetic dendograms for taxa of insects and taxa of mammals. The quantitative method employed for making relational decisions is the blood serum precipitin test.
none;60 minutes;university/college zoology students

NATURAL SELECTION - A CONTRIBUTOR TO MICROEVOLUTION (moths;1974;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle
This lesson uses animation and graphic display to place the student in the role of "predator" of three phenotypic varieties of moths in a variable environment. Students must "hunt" moths and provide the selection pressure to make moth populations "evolve" across several generations of selection.
none;60-90 minutes;university/college zoology students

NATURAL SELECTION - A CONTRIBUTOR TO MICROEVOLUTION (INTRO)
(moth2;1974;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle

This lesson uses tutorial and graphic techniques to provide a working background for studying microevolution. Hardy-Weinberg equations are solved and graphed for population with and without selection. The concept of a stable gene frequency equilibrium is demonstrated.

none;45 minutes;university/college zoology students

A SELF-CONTAINED LAB. WITH A "SIMPLE" BEHAVIOR (kinesis;1972;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle

This lesson uses a stochastic "choice" algorithm and animation to demonstrate orientation behavior in a "bug" exposed to variable stimuli. Students determine the quality (+ or -) and strength of the stimulus, and record "end points" of bug travel. A statistical (chi-square) evaluation of the hypothesis of random distribution is then made.

optional manual;45 minutes;university/college biology students

SOCIAL BEHAVIOR SIMULATED FIELD OBSERVATIONS (birds;1974;unpublished)
Hyatt, Gary
Dept. of Biological Sciences, U of I, Chicago Circle

This lesson uses animation and a stochastic model of bird aggression to allow students to investigate the "personal space" phenomenon typical of many animal groups.

none;60 minutes;college/university zoology students

Zoology--Classification

COMPARATIVE SEROLOGY (serology;1974;unpublished)
Hyatt, Gary; Eades, David C
Dept. of Biological Sciences, U of I, Chicago Circle

This lesson uses "open-ended" investigatory techniques to allow students to build two phylogenetic dendograms for taxa of insects and taxa of mammals. The quantitative method employed for making relational decisions is the blood serum precipitin test.

none;60 minutes;university/college zoology students

Zoonoses

TRANSMISSION OF ZOONOSES (zdis;1975;1979)
Holt, Elsbeth
College of Veterinary Medicine, Univ. of Illinois

The lesson discusses the transmission of zoonoses which are diseases transmitted from animals to man.

none;1 hour;professional students of veterinary medicine